

# **BUILDING LAWS**

of San Francisco

1934



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## **PACIFIC COAST STEEL CORPORATION**

**SUBSIDIARY OF BETHLEHEM STEEL CORP.**

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**COLUMBIA STEEL CO.**

Russ Building, San Francisco

# BUILDING LAWS

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## CITY AND COUNTY OF SAN FRANCISCO 1934

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# THE BUILDING LAW

of

The City and County of  
San Francisco, California

Being Ordinance No. 1008 (New Series)

Approved December 22, 1909

Regulating the construction, erection, enlargement, raising, alteration, repair, removal, maintenance, use and height of buildings; regulating character and use of materials in and for buildings. Establishing fire limits and repealing all Ordinances in conflict with this Ordinance.

Be it Ordained by the People of the City and County of San Francisco as follows:

## PART I.

Section 1. This Ordinance shall be know as "The Building Law" of the City and County of San Francisco.

Section 2. This Ordinance shall apply to all buildings hereafter to be erected, constructed, altered, repaired, raised, added to or built upon within the boundaries of the City and County of San Francisco, except buildings and construction for which permits have been issued by the Board of Public Works prior to the passage of this Ordinance.

## PART II.

Boundary lines of the areas within which various classes of buildings may be erected.

### Fire Limits.

Section 3. Those portions of the City and County of San Francisco within the boundary lines in this section hereinafter set forth shall be known as the fire limits within which it shall be unlawful to erect or construct frame or wooden buildings, or to alter, enlarge, repair, add to or build upon any building or buildings except as in this Ordinance otherwise provided, viz.:

The fire limits shall be bounded by a line commencing at the intersection of the shore line of the Bay of San Francisco with the easterly end of the center line



of Greenwich street; running thence westerly along the center line of said Greenwich street to its intersection with the center line of Sansome street; thence southerly along the center line of Sansome street to its intersection with the center line of Broadway; thence westerly along the center line of Broadway to the center line of Cordelia street; thence southerly along the center line of Cordelia street to its intersection with the center line of Pacific street; thence westerly along the center line of Pacific street to the center of the crossing of Pacific and Powell streets; thence southerly along the center line of Powell street to the center of the crossing of Powell and Sacramento streets; thence easterly along the center line of Sacramento street to the center line of the crossing of Sacramento and Stockton streets; thence southerly along the center line of Stockton street to a point distant one hundred and thirty-seven and one-half ( $137\frac{1}{2}$ ) feet northerly from the northerly line of Bush street; thence westerly and parallel with Bush street on a line distant one hundred and thirty-seven and one-half ( $137\frac{1}{2}$ ) feet northerly from the northerly line of Bush street to a point distant one hundred and thirty-seven and one-half ( $137\frac{1}{2}$ ) feet easterly from the easterly line of Van Ness avenue; thence northerly on a line parallel with Van Ness avenue, to the center line of Washington street; thence westerly and along the center line of Washington street to a point distant one hundred and thirty-seven and one-half ( $137\frac{1}{2}$ ) feet westerly from the westerly line of Van Ness avenue; thence southerly on a line parallel with Van Ness avenue to the center line of California street; thence westerly and along the center line of California street to the center line of Franklin street; thence southerly along the center line of Franklin street to the center of the crossing of Franklin and Turk streets; thence westerly along the center line of Turk street to the center line of the crossing of Turk and Gough streets; thence southerly along the center line of Gough street to its intersection with the center line of Market street; thence southerly and westerly along the center line of Market street to Valencia street;



thence southerly along the center line of Valencia street to the center line of the crossing of Valencia and McCoppin streets; thence at a right angle easterly along the center line of McCoppin street to a point one hundred and forty-four (144) feet easterly from the easterly line of Valencia street; thence extending in a northerly and easterly direction on a radius of three hundred and ninety-six and eight one-hundredths (396.08) feet to the center line of Stevenson street if produced through private property, and along the center line of Stevenson street to the westerly line of Brady street; thence diagonally in an easterly direction across Brady street to the intersection of the east line of Brady street and the center line of Stevenson street produced and Stevenson street; thence along the center line of Stevenson street in a northeasterly direction to the center line of Twelfth street; thence southeasterly along the center line of Twelfth street to the center line of Otis street; thence in a northerly and easterly direction along the center line of Otis street and Mission street to the center line of the crossing of Mission and Ninth streets; thence in a southerly and easterly direction along the center line of Ninth street to the center line of the crossing of Ninth and Minna streets; thence in a northerly and easterly direction along the center line of Minna street to Sixth street; thence in a southerly and easterly direction along the center line of Sixth street to the center of the crossing of Sixth and Howard streets; thence in a northerly and easterly direction along the center line of Howard street to the center line of the crossing of Howard and First streets; thence in a southerly and easterly direction along the center line of First street to the center of the crossing of First and Folsom streets; thence easterly along the center line of Folsom street to a point 137 feet 6 inches west of the westerly line of Beale street; thence in a southerly direction and parallel with Beale street to a point 275 feet southerly from the southerly line of Harrison street; thence in a westerly direction and parallel with Bryant street to the center line of Fremont street; thence in a southerly direction along the center line of Fremont street to

the center line of Bryant street; thence in a westerly direction along the center line of Bryant street to the center line of First street; thence in a southerly direction along the center line of First street to the center line of Brannan street; thence in a westerly direction along the center line of Brannan street to a point 412 feet 6 inches west of the westerly line of Second street; thence in a southerly direction and parallel to Second street to the shore line of the waters of Bay of San Francisco; thence along the shore line of the waters of the Bay of San Francisco in a northerly and westerly direction to the point of commencement.

Also, commencing at a point on the center line of Fulton street 171' 10½" east of the center line of Fillmore street; thence to a point on the center line of Geary street 171' 10½" east of the center line of Fillmore street; thence easterly along the center line of Geary street to a point 175' 7½" east of the centerline of Fillmore street; thence to a point on the center line of Post street 175' 7½" east of the center line of Fillmore street; thence easterly along the center line of Post street to a point 205' 4½" east of the center line of Fillmore street; thence to a point on the center line of Sutter street 205' 4½" east of the center line of Fillmore street; thence westerly along the center line of Sutter street to a point 161' 8½" east of the center line of Fillmore street; thence to a point on the center line of Bush street 161' 8½" east of the center line of Fillmore street; thence easterly along the center line of Bush street to a point 165' 7½" east of the center line of Fillmore street; thence to a point on the center line of Pine street 165' 7½" east of the center line of Fillmore street; thence easterly along the center line of Pine street to a point on the center line of Middle street; thence along the center line of Middle street to a point on the center line of California street; thence westerly along the the center line of California street to a point 164' 1½" east of the center line of Fillmore street; thence to a point on the center line of Sacramento street 164' 1½" east of the center line of Fillmore street; thence westerly along the center line of Sacramento street to a point 190' 7½" west of

the center line of Fillmore street; thence to a point on the center line of California street  $190' 7\frac{1}{2}"$  west of the center line of Fillmore street; thence easterly along the center line of California street to a point  $171' 10\frac{1}{2}"$  west of the center line of Fillmore street; thence to a point on the center line of Pine street,  $171' 10\frac{1}{2}"$  west of the center line of Fillmore street; thence westerly along the center line of Pine street to a point  $190' 7\frac{1}{2}"$  west of the center line of Fillmore street; thence to a point on the center line of Bush street  $190' 7\frac{1}{2}"$  west of the center line of Fillmore street; thence easterly along the center line of Bush street to a point  $184' 4\frac{1}{2}"$  west of the center line of Fillmore street; thence to a point on the center line of Sutter street,  $184' 4\frac{1}{2}"$  west of the center line of Fillmore street; thence easterly along the center line of Sutter street to a point  $171' 10\frac{1}{2}"$  west of the center line of Fillmore street; thence to a point on the center line of Post street  $171' 10\frac{1}{2}"$  west of the center line of Fillmore street; thence westerly along the center line of Post street to a point on the center line of Avery street; thence along the center line of Avery street to a point on the center line of Geary street; thence easterly along the center line of Geary street to a point  $216' 10\frac{1}{2}"$  west of the center line of Fillmore street; thence southerly  $171' 10\frac{1}{2}"$  to a point  $216' 10\frac{1}{2}"$  west of the center line of Fillmore street; thence easterly along lot line to a point  $189' 4\frac{1}{2}"$  west of the center line of Fillmore street; thence to a point on the center line of O'Farrell street  $189' 4\frac{1}{2}"$  west of the center line of Fillmore street; thence easterly along the center line of O'Farrell street to a point  $171' 10\frac{1}{2}"$  west of the center line of Fillmore street; thence easterly along the center line of Fulton street  $171' 10\frac{1}{2}"$  west of the center line of Fillmore street; thence easterly along the center line of Fulton street to the point of commencement. (As amended by Ordinance 5831 N.S.)

Section 3A. Whenever any frame or wooden building now situated within the fire limits shall become damaged through fire, decay, or otherwise to the extent of more than 50% of its actual cash value, the said

building shall not be reconstructed and the remaining portion thereof shall be forthwith removed.

For the purpose of enforcing the above Section 3A, the extent of the damage occurring to such building herein referred to shall be determined by the Board of Public Works.

### **FIREPROOF ROOFING LIMITS**

Section 4. The roofs of all buildings hereafter constructed within the limits hereinafter in this section described shall consist of fire resistant materials, and whenever the covering of the roof or roofs of any building or buildings heretofore constructed within the said limits shall, in the judgment of the Board of Public Works, be or become damaged through fire, decay or otherwise, to the extent of twenty (20) per centum of the area of the said covering of the roof or roofs, then the covering of the roof or roofs shall be reconstructed or replaced with fire resistant materials. Said fire resistant materials shall consist of the same materials required for the roof coverings of all buildings erected within the fire limits of the City and County.

Sub-section 1. Said limits shall be bounded by a line commencing at the intersection of the shore line of the Bay of San Francisco with the easterly boundary of the Presidio Reservation; thence southerly and westerly along the boundary line of the Presidio Reservation to the shore line of the Pacific ocean; thence along the shore line of the Pacific ocean westerly and southerly to its intersection with the County line; thence easterly along said County line to its intersection with Mission Street; thence along the center line of Mission Street to its intersection with Twenty-fifth Street; thence easterly along the center line of Twenty-fifth Street to the center line of Potrero Avenue; thence along the center line of Potrero Avenue to the center line of Division Street; thence along the center line of Division Street to the center line of King Street; thence northeasterly along the center line of King Street to the center line of Seventh Street; thence southerly along the center line

of Seventh Street to the center line of Channel Street; thence northerly along the center line of Channel Street to the shore line of the Bay of San Francisco; thence following the shore line of the Bay of San Francisco to the point of commencement. (As amended by Ordinance 7917. Approved Feb. 23, 1928.)

### PART III.

**Relating to Issuance of Permits, Filing of Plans, Specifications and Statements, Demolition of Buildings, Examination of New Devices and Materials and Interpretation of this Ordinance.**

#### **Permits Must Be Obtained from the Board of Public Works.**

Section 5. It shall be unlawful for any person, firm or corporation to commence or proceed with the erection, construction, alteration, repair, moving or demolition (restoration of plastering or painting excepted) of any building or other structure either private, public, municipal, State or United States in the City and County of San Francisco unless a permit so to do shall have been first obtained from the Board of Public Works. The application for such permit shall in all cases state the estimated cost of the work.

The City and County of San Francisco, the State of California and the United States Government shall be exempted from the payment of the fees charged for such permit under the provisions of the Building Law.

#### **Application for Permit.**

Section 6. The permit may be applied for and obtained by the owner or lessee direct or acting through an architect, engineer, contractor or other agent.

The application shall state the location of the proposed building or structure. It shall give the name and residence address of the actual owner or owners of the land and of the building or structure, the name and residence address of lessee or lessees, if any, and the name and address of the architect, engineer or designer of the building or structure.

The application shall be made upon blanks furnished by the Board of Public Works and shall conform to the requirements as indicated on the blanks so furnished.

The application shall be filed in duplicate and be accompanied by two complete sets of plans and specifications which shall clearly show all parts of the construction, including a plan of each floor of a new building. One of said sets of plans shall be on cloth.

If said application, plans and specifications are approved, such approval shall be endorsed on each thereof in writing by the Board of Public Works, and one of said applications, together with the set of plans on cloth and one set of specifications, all with such approval endorsed thereon, shall be securely bound together and delivered to the party obtaining the permit who must keep such application, plans and specifications on the premises where such construction is being conducted, open for inspection at all times during such construction, until final inspection is made in accordance with Section 9. The owner shall be responsible for the plans being kept on the building.

The other application, set of plans and set of specifications after being approved and having such approval endorsed thereon in writing by said Board of Public Works, shall be indexed and kept on file by the Board of Public Works in such a manner as to be readily inspected by the public upon application to the chief clerk of the building permit office, and the erection, construction or alteration of said building, structure or any part thereof when proceeded with shall be constructed in accordance with such approved applications, plans and specifications and any modifications made in plans and specifications shall be subject to further approval, such modifications shall be made to appear in the same form and date of such further approval, shall be endorsed on both the set of plans and specifications and be noted on the applications, filed in the office of the Board of Public Works and kept on the premises where such construction is being conducted.



When the estimated cost of erecting, altering or repairing any building or structure, does not exceed one thousand dollars (\$1,000), the person, firm or corporation proposing to make such improvements shall file with the Board of Public Works in lieu of the plans and specifications hereinafter provided for, a statement in writing setting forth what repairs, alterations or improvements are contemplated, and describing the general character, nature and extent of the same.

### Issuance of Permit.

Section 7. Upon the filing of an application in accordance with the requirements of the aforesaid Section 6 the Board of Public Works shall ascertain whether such plans and specifications embody all requirements applicable by law and Ordinance in such case, and if the requirements be met shall issue a building permit to the applicant, after plans for plumbing, lighting, ventilation and other sanitary features have been approved by the Board of Health, giving him permission to erect or alter the building or structure at the place and in accordance with said approved applications, plans and specifications.

Such permit and the approved application plans and specifications must be exhibited to any authorized representative of either the Police, Fire or Health Department or the Board of Public Works or other authorized person making a demand therefor.

The permit for the erection, alteration or repair of any building must be kept on the premises where the erection, alteration or repair of such building is being conducted.

The Board of Public Works may grant permit for the erection of any part of the building, or any part of a structure, where plans, specifications and detailed statements have been presented for the same before the entire specifications, plans and detailed statements of said building or structure have been submitted.

Any approval which may be issued by said Board pursuant to the provisions of this Ordinance, but under which no work is commenced within six months from the time of issuance, shall expire by limitation, but

may in the Board's discretion, be renewed without further charge.

### **Demolition of Building.**

Section 8. When a building or structure is to be demolished it shall be done in a manner which is approved by and satisfactory to the Board of Public Works. Said owner or lessee shall in all cases notify the Board of Public Works when said building is ready for inspection.

### **Certificate of Occupancy to Be Issued.**

Section 9. It shall be the duty of the Board of Public Works to make or cause to be made a final inspection and examination of all buildings before any such buildings are occupied, and if such buildings are found to have been erected and constructed in conformity to all the provisions and requirements of this Ordinance, said Board of Public Works shall issue on a printed form provided by the Board of Public Works for that purpose a certificate thereof to the owner or lessee, a duplicate of which said certificate shall be indexed and filed for reference in the office of said Board.

No person, firm or corporation shall occupy any building or structure until such certificate has been issued.

It shall be the duty of the Police Department to stop the occupancy of all buildings that have been erected or altered until certificate of occupancy has been issued by the Board of Public Works.

### **Temporary Certificates of Occupancy.**

Section 10. The Board of Public Works may issue a certificate of temporary occupancy, allowing the use of a portion or portions of any building, provided said portion or portions of said building has been erected and constructed in accordance with all the requirements of this Ordinance governing the erection and construction of said building.

### **Non-Liability of City and County for Damages.**

Section 11. Every application for a building permit shall contain an agreement to save the City and County



and its officials harmless from all costs and damages which may accrue from use or occupancy of the sidewalk, street or sub-sidewalk space.

### **Fees for Permits.**

See Ord. 3.04120, app. April 3, 1933.

### **Permits for Use of Sub-Sidewalk Space.**

Section 13. Permits shall be granted by the Board of Public Works for the use of the space below the sidewalk upon application, which permits must be made upon blanks and subject to such regulation as the Board of Public Works may devise.

No fee will be exacted for the permit for the use of the sub-sidewalk space, but the Board of Supervisors of the City and County reserves the right to suspend or annul the privilege of maintaining such cellar or vault, or to exact a license or rental for the use thereof, or to apply such sub-sidewalk space, or any portion thereof, to municipal uses.

The granting of a permit to use the sub-sidewalk space shall carry with it the right to excavate the space and to build the necessary retaining walls.

As a guarantee for the proper restoration of any portion of the roadway fronting the same which may be disturbed or injured by reason of the construction of any part of a building or structure, the permittee shall deposit with the Board of Public Works for each and every front foot or fraction thereof of the premises in the front of which the excavation for such cellar or vault is to be made the sum of \$2.50 when the street in front thereof is paved with blocks of asphalt or bitumen on concrete, and \$1.50 when such street is paved with basalt blocks or cobblestones on a sand foundation. Said deposit shall be refunded to the permittee upon the indorsement on the permit issued therefor, of a certificate of the Bureau of Streets certifying to the satisfactory condition of such roadway.

Should the permittee fail to restore any pavement thus injured, the Board of Public Works may, after ten days' notice in writing posted at the building, restore the pavement and pay the cost of such restoration from the deposit.

**Permit for Temporary Occupancy of a Public Street.**

Section 14. No person, firm, company or corporation shall place or cause to be placed upon a public street, or any portion thereof, in the City and County of San Francisco, any materials or appliances for use in the construction, alteration, or repair of a building of any kind, or for any other purpose necessitating temporary occupancy of any portion of the public streets, without first obtaining a permit therefor from the Board of Public Works of said City and County.

Such materials and appliances shall not occupy more than one-third of the width of the roadway of the street, and not more than one-half of the width of the sidewalk, and shall be placed thereon under the direction and to the satisfaction of the Board of Public Works, but in no case shall they be placed or caused to be placed on the roadway of any street within four feet six inches of the outer rail of any street railroad track.

The permit aforementioned and required shall be granted only to the owner or lessee or the duly authorized agent of the owner or lessee of the lot upon which a building, or in front of which a sidewalk or other work is proposed to be constructed, altered or repaired, upon the depositing by such owner, lessee or agent with said Board of Public Works the sum of twenty (20) dollars for each and every fifty (50) feet of the frontage or fraction thereof, of such building or such sidewalk or other work, as a guaranty to the City and County that the permittee will remove, or cause to be removed, all dirt, debris and materials of any kind from the street, to the satisfaction of the said Board of Public Works, immediately upon the completion of the construction, alteration or repair of such building or such sidewalk, or at such times prior thereto, when in the judgment of said Board the public interest or convenience will be subserved by the removal of the same, or any portion thereof. And every permit granted as in this Ordinance provided shall be subject to such guaranty.

The Board of Public Works shall prescribe in the permit granted the time for such occupancy of a street.

Upon the failure or neglect of the permittee to remove or cause to be removed to the satisfaction of said Board of Public Works such dirt, debris or materials as aforesaid within five days after being notified so to do by said Board, by a notice posted on the premises, the money so deposited as a guaranty, or so much thereof as may be necessary, shall be used by said Board for the removal of such dirt, debris or materials.

All the materials intended for use in the purposes aforesaid shall be confined to and occupy only such portion of the street as the permit may designate, and all sand, dirt and other materials or debris of any kind shall be prevented from being blown or otherwise moved to any other portion of the street, or from interfering in any way whatever with the carrying on of any business or enjoyment of any property.

No materials of any kind shall be deposited in any gutterway of any street so as in any manner to obstruct the same.

Section 14½. No permit provided for in Section 14 of this Ordinance, to use the sidewalks and streets during the construction of a building, shall be issued by the Board of Public Works unless a fee therefor shall have been paid to said Board of Public Works, equal to one-tenth of 1 per cent of the estimated cost of said building or structure. (Added by Ordinance 5194, N. S.)

### **New Devices and Materials.**

Section 15. In cases in which it is claimed that any equally good or more desirable mode or manner of construction or material, or device for fireproofing, other than specified in this Ordinance can be used in the erection or alteration of buildings, the Board of Supervisors, upon written application to them for permit to use the same, shall have power to appoint a Board of Examiners consisting of not less than three nor more than five members, one of whom must be an architect, one a civil engineer, and one a builder, each of whom shall have had at least ten (10) years' experience in San Francisco as an architect, civil engineer or builder, who shall take the usual oath of office. Said examiners shall adopt rules and specifications for examin-

ing and testing such mode or manner of construction, or material, or device for fireproofing, and furnish a copy of the same to the applicant. The said examiners shall thereupon notify such applicant to submit to such examination and to make tests in the presence of the said examiners, or a majority thereof, according to such rules and specifications. All expenses of such examiners and of such examinations and tests shall be paid by the applicant, and said examiners may require security therefor.

The said examiners shall, after such examination and tests, certify the results and their decision on the said application to the Board of Supervisors, who shall have power, in the event of the examination and tests being satisfactory, to grant a permit to the applicant in accordance with such decision of the said Board of Examiners.

### **Interpretation of Ordinance.**

Section 16. It is the declared intention of this Ordinance to define limits of construction which shall produce safe buildings or structures. Nothing in this Ordinance shall be construed to prevent those forms of construction being used which will obviously be of greater strength or security than called for by the provisions of this Ordinance.

The Board of Public Works is hereby authorized to employ, when it deems such service necessary a Consulting Engineer of ten years' experience to assist the Department of Buildings in the interpretation of this Ordinance, the examination of plans and the inspection of buildings or structures.

## **PART IV.**

### **DEFINITION OF TERMS.**

#### **Building or Structure.**

Section 17. For the purposes of this Ordinance the words "Building" or "Structure" define any construction the arrangement of which may affect the health, safety or general welfare of man or animals.

#### **Alterations.**

"Alterations" means any change or addition.

### **Repairs.**

"Repairs" means the reconstruction or renewal of any existing part of a building, or of its fixtures or appurtenances by which the strength of the fire risk is not affected or modified.

### **Party Wall.**

"Party wall" means a wall used, or built to be used, in common by two or more buildings.

### **Partition Wall.**

"Partition wall" means any interior wall other than a division wall.

### **Bearing Wall.**

"Bearing wall" means any wall carrying all or part of the interior load of a building.

### **Curtain Wall.**

"Curtain wall" means any wall supported at intervals on the frame of a building, or a wall which is self-supporting only on the exterior of a building.

### **Exterior Wall.**

"Exterior wall" means every outer wall or vertical enclosure of a building.

### **Fire Wall.**

The term "fire wall" shall apply to all walls built for the purpose of fire resistance. The term also applies to that portion of walls above roof surface.

### **Retaining Wall.**

The term "retaining wall" shall apply to all walls constructed for the purpose of holding back or supporting earth.

### **Division Wall.**

The term "division wall" means any wall other than an exterior wall, or a party wall, which extends the full height of a building and through the roof, and such walls shall be constructed in all respects as provided for party walls. Such walls may be bearing walls or self-supporting only.

### **Thickness of Wall.**

The term "thickness of a wall" means the minimum thickness of such wall measured between any two floors, or between floor and ceiling or roof.

**Cellar.**

The term "cellar" means a lower story of which one-half or more is below the level of the curb line of the street, or streets, on which it faces, or of the general level of the ground.

**Basement.**

The term "basement" means a lower story of which a part, but less than one-half is below the level of the curb line of the street or of the general level of the ground.

**Story.**

The term "story" means (for the calculation of the thickness of foundation and size of studding) the vertical distance from floor to ceiling. The minimum height of a story shall be seven and one-half feet.

**Terra Cotta.**

The term "terra cotta," when used alone, shall apply to the hand-molded, baked clay material used for architectural decoration and construction of walls.

**Hard Terra Cotta Fireproofing.**

The term "hard terra cotta fireproofing" shall apply to all clay fireproofing material that is manufactured without sawdust.

**Semi-Porous Terra Cotta Fireproofing.**

The term "semi-porous terra cotta fireproofing" shall apply to all clay fireproof material having fifty per centum of sawdust measured by volume, mixed with fifty per centum of clay.

**Steel Frame Construction.**

The term "steel frame construction" shall apply to every metal frame used for the support of a building. The term "steel frame" shall include all the cast and wrought iron, as well as steel, used in the construction.

**Girders.**

The term "girders" in floor construction shall apply to all beams that are used for the support of other beams.

**Reinforced Concrete Construction.**

The term "reinforced concrete construction" shall apply to all rock or gravel concrete used in the construc-



tion of posts, beams, lintels, girders, arches, walls and floors which are strengthened by iron or steel mesh, wires, cables, bars or shapes embedded in the concrete in such a manner that the two materials act in unison in resisting stresses due to external loads, the steel resisting all tension stresses and assisting in the resistance of shearing stresses.

### **Dead Load.**

The term "dead load" shall apply to and include the weight of the walls, floors, etc., of a building, including all permanent construction.

### **Live Load.**

The term "live load" shall apply to and include all weights in a building other than dead loads. Such loads shall include temporary construction, furniture and people.

### **Ton.**

The term "ton" means 2,000 pounds.

### **Masonry.**

The term "masonry" shall apply to brick, stone, interlocking hollow tiles, concrete or reinforced concrete construction.

### **Portable Steam or Hot Water Radiators**

A portable steam or hot water radiator wherein gas or electricity is used for producing heat, is any gas or electrically heated heating device, constructed and equipped as required in Section 252 of this Ordinance, wherein self-contained, tightly-enclosed water is used to radiate heat.

### **Theatre.**

A "theatre" is a building which contains seats for the public, and to which an admission fee is charged, and in which movable scenery is used.

### **Office Building.**

An "office building" is a building divided into rooms intended and used for office purposes, and no part of which shall be used for living purposes, except by the janitor and his family.

### **Warehouse.**

A "warehouse" is a building used exclusively for the storage of merchandise.

### **Hospital and Sanitarium.**

A "Hospital or sanitarium" is a building used for the keeping and care of sick, invalids and infirm people, and having accommodation for more than five such people. See Ord. 8803 (N. S.), app. July 15, 1930.

### **Hotel.**

A "hotel" is a building or part thereof intended, designed or used for supplying food and shelter to residents or guests and having a general public dining room or cafe, or both, and containing more than fifteen guests' rooms.

### **Lodging House.**

A "lodging house" is a building containing more than fifteen rooms in which persons are or may be accommodated with sleeping apartments for hire, by the day, week or month.

### **Dwelling.**

A "dwelling" is a building which shall be intended or designed for or used as the home or residence of not more than two separate and distinct families or households, and in which not more than fifteen rooms shall be used for the accommodation of boarders, and no part of which structure is used as a store or for any business purpose. Two or more such dwellings may be connected on each story and used for boarding purposes, provided the halls and stairs of each house shall be left unaltered and kept open and in use as such.

### **Flats.**

"Flats" is a building of two or more stories containing separate self-contained dwellings, each dwelling having an independent entrance on the level of the street or from an outside vestibule on the level of the first floor.

### **Tenement House and Apartment House.**

A "tenement house or apartment house" is any building coming within the definition of a tenement house as defined in the State Tenement House Law.



### **Yard.**

A "yard" is an open, unoccupied space on the same lot as the house, between the extreme rear line of the house and the rear line of the lot.

### **Court.**

A "court" is an open, unoccupied space other than a yard on the same lot as the building. A court extending to the yard or street is an outer court. A court surrounded on all sides by a building on the same lot is an inner court. A court extending to the lot line is a lot line court.

### **Shaft.**

A "shaft" in a building is any open space other than a court, extending through the building for two or more stories, exterior or interior, whether for light, air, elevator, dumb-waiter or any other purposes. A vent shaft is one used solely to ventilate or light, or both, a watercloset compartment or bathroom.

### **Stair Hall.**

A "stair hall" includes the stairs, stair landings, hallways or passages through which it is customary to pass in going from the entrance to the roof.

### **Corner Lot.**

A "corner lot" is a lot situated at the corner of two streets or street and a public alley not less than 16 feet in width.

### **Measurements for Height, Length and Width of Buildings and Seating Capacity.**

Section 18. For the purpose of this Ordinance the greatest horizontal linear dimension of any building shall be its length, and the next greatest horizontal linear dimension its width.

The height of buildings shall be measured from the curb level at the center of the main front of the building to the top of the highest point of the roof beams in case of flat roofs, and for high pitched roofs the average height of the gable shall be taken as the highest point of the building.

For a building erected upon a street corner, the measurements shall be taken from the curb level opposite the center of either front.

When the ground upon which the walls of a structure are built is above the street level, the average level for the ground adjoining the walls may be taken instead of the curb level for the height of such structure.

In computing the seating capacity of any room or building in which seats are not fixed an allowance of eight square feet of floor area shall be made for each person and all space between the walls or partitions of such room or building shall be measured in this computation.

#### PART V.

### MATERIALS, LOADS, ALLOWED STRESSES AND GENERAL PROVISIONS FOR CONSTRUCTION.

#### Brick.

Section 19. The brick used in all buildings shall be good, hard, well-burnt brick, or some approved form of hard sandlime or cement brick.

All materials must be of good quality.

When old bricks are used in any wall they shall be thoroughly cleaned before being used, and shall be whole and good, hard, well-burnt bricks.

#### Sand.

Section 20. The sand used for mortar in all buildings shall be clean, grit sand, free from loam and dirt.

#### Gravel.

Section 20½. Gravel shall be composed of clean pebbles or hard, homogeneous rock, of graded sizes and free from dirt or other foreign matter.

#### Lime Mortar.

Section 21. Lime mortar shall be made of one part lime and not more than five (5) parts of sand, measured dry. All lime used for mortar shall be thoroughly burnt, of good quality, and properly slaked before it is mixed with the sand. Such mortar must be mixed at least five (5) days before using.

### Portland Cement.

Section 22. This term is applied to the finely pulverized product resulting from the calcination to incipient fusion of an intimate mixture of properly proportioned argillaceous and calcareous materials, and to which no addition greater than 3 per cent has been made subsequent to calcination.

The specific gravity of the cement, ignited at a low red heat, shall not be less than 3.10, and the cement shall not show a loss on ignition of more than 4 per cent.

It shall leave by weight a residue of not more than 8 per cent on the No. 100, and not more than 25 per cent on the No. 200 sieve.

It shall not develop initial set in less than thirty minutes, and must develop hard set in not less than one hour, nor more than ten hours.

The minimum requirements for tensile strength for briquettes one inch square in section shall be within the following limits, and shall show no retrogression in strength within the periods specified:

#### Neat Cement.

Age	Strength
24 hours in moist air.....	175 lbs.
7 days (1 day in moist air, 6 days in water)..	500 "
28 days (1 day in moist air, 27 days in water)..	600 "

#### One Part Cement, Three Parts Standard Sand.

7 days (1 day in moist air, 6 days in water)..	200 lbs.
28 days (1 day in moist air, 27 days in water)..	275 "

### Cement Mortar.

Section 23. Cement mortar shall be made of cement and sand in the proportion of one part of cement and not more than three parts of sand, and shall be used before the initial set has taken place. The cement and sand are to be measured and thoroughly mixed before adding water.

### Cement and Lime Mortar.

Section 24. Cement and lime mortar, mixed, shall be made on one (1) part cement to not more than six (6) parts of lime mortar, measured in a box.

### **Concrete.**

Section 25. Concrete shall be made of Portland cement sharp, clean sand and broken stone, broken brick, terra cotta, cinders or gravel. Concrete made with broken stone shall be termed rock concrete. Rock concrete for foundations shall be composed of not less than one part Portland cement, three parts sand and five parts broken stone of main dimensions not more than two inches. Rock concrete for floors, backing of ashlar, fireproofing and reinforced walls shall be composed of not less than one part Portland cement, two parts sand and four parts broken stone of major dimensions not exceeding one inch. Gravel of graded size may be used in place of broken stone in all rock concrete. (See Section 109).

Concrete made of broken brick, terra cotta or cinders shall be mixed in the proportion of not less than one part of Portland cement, two parts of sand and four parts of broken brick, terra cotta or cinders, as the case may be. Such concrete shall only be used for floors, floor slabs and fireproofing. All concrete shall be mixed by hand and shall be turned not less than twice dry and twice wet or may be mixed by machine. (Amended by Ordinance 1039 N. S.)

### **Reinforced Concrete.**

Section 26. Reinforced concrete shall be as described under "Reinforced Concrete" in Class "B" buildings. (See Section 109.)

### **Brick Masonry.**

Section 27. All brick masonry shall be of brick laid in cement mortar or lime and cement mortar.

All bricks shall be well wet before laid and shall have close joints filled with mortar.

In all brick walls at least every sixth course shall be a heading course.

The thickness of brick walls shall be as specified under the different classes of buildings.

In no case shall any wall or walls of any building be carried up more than five (5) feet in advance of any other walls unless proper provisions for suitable anchors and ties are made. The front, rear, side and

*Compliments*

**HENRY COWELL  
LIME & CEMENT  
COMPANY**

**Mount Diablo Cement**

**Cowell Santa Cruz Lime**

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**WHOLESALE DEPARTMENT**

**2 Market Street, San Francisco, California**

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**RETAIL BRANCHES**

**Front and Union Streets, 530 Pacific Avenue,  
San Francisco, Calif.**

**Santa Cruz, Calif.**

**81 Franklin Street,**

**589 W. Santa Clara Street,**

**Oakland, Calif.**

**San Jose, Calif.**

**509 I Street, Sacramento, California**

party walls shall be properly bonded together, or they shall be anchored to each other, every six (6) feet in their height by wrought-iron tie anchors not less than one and one-half ( $1\frac{1}{2}$ ) by three-eighths ( $\frac{3}{8}$ ) of an inch in size, and not less than thirty-eight (38) inches in length. The side anchors shall be built into the side or party walls not less than sixteen (16) inches, and into the front and rear walls, so as to secure front and rear walls to the side or party wall, when not built and bonded together.

All exterior piers shall be anchored to the beams or girders on the level or each tier.

The walls and beams of every building, during the erection or alteration thereof, shall be stoutly braced from the beams of each story, and when required shall also be braced from the outside, until the building is enclosed.

The walls and the piers of all buildings shall be properly and solidly bonded together with close joints filled with mortar. They shall be built to a line and carried up plumb and straight. The walls of each story shall be built up the full thickness to the top of the beams above. All walls shall be built solid throughout except for flues.

### **Walls and Piers.**

Section 28. In all walls of the thickness specified in this Ordinance the same amount of material may be used in piers and buttresses. Said piers and buttresses shall not be more than twenty (20) feet on centers, and walls between said buttresses shall not be less than thirteen (13) inches thick.

### **Brick Piers.**

Section 29. The total load on such brick piers shall not exceed seven tons per square foot if laid in lime mortar, ten tons per square foot if laid in lime and cement mortar, and fifteen tons per square foot if laid in cement mortar. The area of cross section shall be net and no pier carrying a load shall have an unsupported length greater than ten times its least horizontal dimension.



### **Ashlar Facing.**

Section 30. Stone used for the facing of any building and known as ashlar shall not be less than four (4) inches in thickness.

Stone ashlar shall be anchored to the backing, which shall be of such thickness as to make the walls, exclusive of the ashlar, conform in thickness with the requirements of this Ordinance, provided that if the ashlar be at least eight (8) inches thick, and bonded into the backing, it may be counted as part of the thickness of the wall.

All ashlar stone, unless bonded, shall be strongly and securely anchored to the wall with iron anchors laid into the stone at least one (1) inch.

Iron ashlar plates used in imitation of stone ashlar on the face of a wall shall be backed with the same thickness of masonry as for stone ashlar.

The backing of all stone ashlar shall be laid with cement mortar or cement and lime mortar mixed, but the back of the ashlar may be parged with lime mortar to prevent discoloration of the stone.

### **Facing.**

Section 31. Where brick facing is used on a building of more than four stories in height with other than brick walls, the minimum thickness of said facing shall be eight inches, and the facing shall have a full header every seventh course.

Frame buildings may be veneered with a four-inch brick wall, provided that each brick in every fourth course be securely anchored to the frame with corrugated metal ties of 20d wire nails. (Amended by Ordinance 6044, N. S.)

### **Increased Thickness of Walls for Buildings of Great Depth.**

Section 32. Where any building without a cross-wall or buttress exceeds a depth of one hundred and sixty (160) feet, the side or bearing walls thereof shall be increased in thickness for (4) inches more than is prescribed in this Ordinance for the thickness of walls for each 100 feet or fraction thereof of such excess depth.

### **Reduced Thickness for Interior Walls.**

Section 33. Where interior cross-walls are used they may be made four (4) inches less in thickness than exterior walls, provided they are self-supporting only.

### **Walls Upon Steel Supports.**

Section 34. Walls of street fronts or courts may be carried on steel columns and girders and they shall be of the thickness required at the story at which they commence.

### **Increasing Height of Walls.**

Section 35. When it is desired to increase the height of existing walls of the thickness required by this Ordinance the weight of the additional walls shall be carried on a frame of steel girders and columns, securely anchored to the existing wall and extending to an independent foundation. Lining of walls to support additional loads is hereby prohibited.

### **Walls of Buildings Now in Course of Construction.**

Section 36. Any building, the erection of which was commenced in accordance with the specifications and plans submitted to and approved by the Department of Public Works prior to the passage of this Ordinance, if properly constructed and in safe condition, may be completed, or built upon, in accordance with the requirements of the law as to thickness of walls, in force at the time such specifications and plans were approved.

### **Existing Party Walls.**

Section 37. Walls heretofore built for or used as party walls, whose thickness at the time of their erection was in accordance with the requirements of the then existing laws, but which are not in accordance with the requirements of this Ordinance, may be used, if in good condition for the ordinary uses of party walls, provided the height of the same be not increased

### **Parapet or Fire Walls.**

Section 38. All exterior division or party walls shall have parapet walls of thickness not less than that of

the wall of the story next below, carried not less than three (3) feet above the roof, and coped with stone, terra cotta, cast iron or cement.

When one (1) parapet wall of a building rises above an adjoining wall of said building the same shall be braced by a buttressed return (of the thickness required for the parapet walls) the length of which, at an angle of 45 degrees from its top, shall equal the difference in height of the two walls.

Walls facing on streets not less than forty (40) feet in width, where the continuous pitch of the roof (from its ridge to the crown mould of a cornice projecting not less than eighteen (18) inches) is not less than twenty (20) degrees, are exempt from the requirements of this section.

Such walls may be stepped to follow slope of roof.

Parapet or fire walls over four (4) feet in height shall have a 3 inch by 3 inch continuous steel angle built into the wall not less than one (1) foot from the top of wall. There shall be connected to this angle at intervals of not less than twelve (12) feet  $\frac{3}{4}$ -inch rods or other approved anchors extending back and down to the roof and fastened thereto.

### **Plain Concrete Walls.**

Section 39. Walls built of concrete without reinforcement shall be of the same thickness and under the same conditions as brick walls.

### **Reinforced Concrete Walls and Piers.**

Section 40. Reinforced concrete walls and piers shall be constructed in accordance with Sections of this Ordinance relating to Class "B" buildings.

### **Recesses, Chases and Flues in Walls.**

Section 41. In buildings that do not exceed four (4) stories in height above ground-floor level, recesses for stairways and elevators may be allowed in the walls, provided they are not more than 8 feet 0 inches in width of recess, and in the same wall, do not occur nearer than 30 feet 0 inches on centers.

The wall forming the back of such recess must be at least 13 inches in thickness for its entire distance from basement floor to top of wall, a total of five (5) stories.

For buildings of more than four stories in height, the wall forming the back of the recess may be 13 inches in thickness for the upper five (5) stories but must be at least 17 inches in thickness for any further lower stories and for the basement.

The usual bond-iron shall be carried through backing wall of recess of each story level, and securely anchored at ends, or to the adjoining bond-iron.

A chase for water or other pipes shall not be made in any pier, unless said pier is at least four (4) inches more in thickness than is required for its kind and height of building, and in a wall the chase for such pipes shall not exceed one-third (1-3) the thickness of such wall, nor have less than eight (8) inches of wall at back of chase. The chases around such pipe or pipes shall be filled with incombustible material for a distance of one (1) foot at top and bottom of each story.

No horizontal chase for pipes shall exceed seven (7) feet in length, and such chase shall, after pipes are in place, be filled solid with concrete, or brick and cement mortar. There shall be a space of at least two (2) feet between any chase and a flue and a space of at least four (4) feet between any two (2) chases or between a chase and recess.

The aggregate area of recesses and chases in any wall shall not exceed one-fourth of the whole area of the face of the wall in any story.

If any horizontal section through any part of any bearing wall in any building shows more than thirty (30) per centum of area of flues, chases, recesses and openings in a length of ten feet, the said wall shall be increased four (4) inches for every fifteen (15) per centum or fraction thereof of flue chase, recess and opening area in excess of thirty (30) per centum.

### **Arches and Lintels.**

Section 42. Openings for doors and windows in all brick, stone or concrete buildings shall have good and sufficient arches of stone, brick, concrete or terra cotta, well built and keyed and with good and sufficient abutments; or the opening shall have lintels of stone reinforced concrete or steel of sufficient strength, which shall have a bearing at each end of not less

than five (5) inches on the wall. The inside lintel may be of cast iron, wrought iron or steel, and in such case stone blocks or cast iron or steel plates shall be required at the ends where the lintel rests on the walls except when the opening is less than six (6) feet in width. Cast iron lintels shall not be used over openings exceeding eight (8) feet in width.

All masonry arches shall be capable of sustaining the weight and pressure which they are designed to carry. Tie rods shall be used where necessary to secure stability.

### **Piles.**

Section 43. Timber or reinforced concrete piles may be used for the foundation of buildings or structures.

Timber piles shall be at least seven inches in diameter at the small end and shall be cut off below standing water line.

Timber piles may be capped with concrete at least 12 inches thick or with timber at least 12 inches thick and drift bolted to each pile, but all timber shall be below standing water line. There shall be a clear distance of at least one foot between any part of adjacent piles. Timber piles driven to rock or to refusal may be loaded not to exceed five hundred (500) pounds per square inch of middle section area. Timber piles driven in yielding material may be loaded not to exceed one and one-half tons per inch of diameter of middle section, but such piles shall be over twenty feet long and none such shall be loaded to exceed twenty-five tons.

Reinforced concrete piles may be built in place or driven after building by water jet or by hammer if head is protected from injuries. They shall be built in accordance with the provisions for the construction of reinforced concrete in Class B Buildings as far as such provisions apply. The ratio of length to least cross sectional dimensions at the center shall not exceed 25. Reinforced concrete piles shall not be loaded to exceed 350 pounds per square inch of concrete at middle section.

There shall be a clear space of at least one foot between any part of adjacent piles.

### **Timber.**

Section 44. All timber used in construction of build-

ings shall be free from large, loose or rotten knots, wind shakes and other defects.

**Table of Allowed Unit Stresses.**

	White Pine Spruce	Douglas Oregon Yellow Fir	Washing- ton or Red Fir	Red- wood
Tension with grain....	700	1,200	1,000	700
Tension across grain..	50	200	150	40
Compression with grain end bearing....	800	1,600	900	800
Columns under fifteen Diameters .....	700	1,000	800	700
Compression a c r o s s grain .....	200	300	250	200
Transverse extreme fibre stress .....	700	1,600	800	750
Modulus of elasticity..	500,000	700,000	550,000	350,000
Shearing with grain....	100	150	125	100
Shearing across grain	500	750	600	400

### **Timber Columns.**

Timber columns of Oregon pine of a length greater than fifteen diameters shall have an allowed stress per square inch not exceeding that given by the formula:

$1300 - 20 \frac{L}{D}$ , where L equals length  
and D equals least side of diameter.

### **Wrought Iron.**

Section 45. All wrought iron shall be uniform and fibrous. It shall have an ultimate tensile resistance of not less than 48,000 pounds per square inch, and elastic limit of not less than 24,000 pounds per square inch, and an elongation of 20 per centum in eight inches when tested in small test pieces.

### **Steel.**

Section 46. All structural steel used in buildings shall be free from seams, flaws, cracks, defective edges or other defects, and shall have a smooth, uniform finish.

All structural steel used in beams and columns and in other large members shall have an ultimate tensile resistance of from 60,000 pounds to 70,000 pounds per



square inch, an elastic limit of not less than one-half of its ultimate strength and a percentage of elongation in eight inches equal to 22 per centum. Such steel shall also bend 180 degrees to a diameter equal to the thickness of the piece tested without fracture on the outside of the bent portion when tested in a test piece.

Rivet steel shall have an ultimate resistance of from 48,000 pounds to 58,000 pounds per square inch, an elastic limit not less than one-half of its ultimate strength, and a percentage of elongation in eight inches equal to 26 per centum.

### Cast Steel.

Section 47. Cast steel shall have an ultimate strength of from 60,000 to 70,000 pounds per square inch, an elastic limit equal to 45 per cent of its ultimate resistance, and an elongation in two inches of 18 per centum.

### Allowable Stresses

Section 48. All parts of the structure shall be so proportioned that the sum of the maximum static stresses in pounds per square inch shall not exceed the following:

(a) Tension. Rolled steel on net section.....	18,000
Cast Steel on net section.....	16,000
(b) Compression. Rolled Steel, on short lengths or where lateral deflection is prevented..	18,000
Cast Steel .....	16,000
On gross section of columns,	
18,000	

$$1 + \frac{1^2}{18,000r^2}$$

with a maximum of .....15,000

In which 1 is the unsupported length of the column, and r is the corresponding least radius of gyration of the section, both in inches.

For main compression, the ration  $1/r$  shall not exceed 120, and for bracing and other secondary members, 200.

(c) **Bending.** On extreme fibres of rolled shapes, and built up sections, net section, if lateral deflection is prevented.....18,000

When the unsupported length  $l$  exceeds 15 times  $b$ , the width of the compression flange, the stress in pounds per sq. in. in the latter shall not exceed,

$$20,000$$


---


$$1 + \frac{1^2}{2,000b^2}$$

The laterally unsupported length of beams and girders shall not exceed 40 times  $b$  the width of the compression flange.

On extreme fibres of pins, when the forces are assumed as acting at the center of gravity of the pieces .....27,000

(d) **Shearing.** On pins .....13,500

On power-driven rivets .....13,500

On turned bolts in reamed holes with a clearance of not more than 1-50 of an inch.....13,500

On handdriven rivets .....10,000

On unfinished bolts .....10,000

On the gross area of the webs of beams and girders, where  $h$ , the height between flanges in inches, is not more than 60 times  $t$ , the thickness of the web in inches .....12,000

On the gross area of the webs of beams and girders if the web is not stiffened where  $h$ , the height between flanges in inches is more than 60 times  $t$ , the thickness of the web, the maximum shear per square inch,

$$\frac{S}{A} \text{---shall not exceed}$$

$$18,000$$


---


$$1 + \frac{h^2}{7,200t^2}$$

In which  $S$  is the total shear, and  $A$  is gross area of web in square inches.

	Double	Single
	Shear	Shear
(e) Bearing. On pins .....	30,000	24,000
On power-driven rivets .....	30,000	24,000
On turned bolts in reamed holes.....	30,000	24,000
On hand-driven rivets .....	20,000	16,000
On unfinished bolts .....	20,000	16,000
On expansion rollers per lineal inch 600 times the diameter of the roller in inches.		

### Beams and Girders.

(a) **Rolled beams** shall be proportioned by the moment of inertia of their net section. Plate girders with webs fully spliced for tension and compression shall be so proportioned that the unit stress on the net section does not exceed the stresses specified as determined by the moment of inertia of the net section.

(b) **Plate girder** webs shall have a thickness of not less than  $1/160$  of the unsupported distance between the flanges.

(c) **Web splices** shall consist of a plate on each side of the web capable of transmitting the full stress through the splice rivets.

(d) **Stiffeners.** Stiffeners shall be required on the webs of rolled beams and plate girders at the ends and at points of concentrated loads, and at other points where  $h$  the clear distance between flanges is greater than  $85t\sqrt{18,000 (A/S)-1}$ , in which  $t$  is the thickness of the web. When stiffeners are required, the distance in inches between them shall not be greater than  $85t\sqrt{18,000 (A/S)-1}$ , or not greater than 6 feet. When  $h$  is greater than 60 times  $t$  the thickness of the web of a plate girder, stiffeners shall be required at distances not greater than 6 feet apart. Stiffeners under or over concentrated loads shall be proportioned to distribute such loads into the web.

Plate girder stiffeners shall generally be in pairs,

one on each side of the web, and shall have a close bearing against the flange angles at points of concentrated loadings; stiffeners over the end bearings shall be on plate fillers. The pitch of rivet in stiffeners shall not exceed 6 inches.

(e) **Flange plates** of all girders shall be limited in width so as not to extend more than 6 inches more than 12 times the thickness of thinnest plate beyond the outer row or rivets connecting them to the angles.

(f) **Crane runway girders** and the supporting framework shall be proportioned to resist the greatest horizontal stresses caused by the operation of the cranes.

(g) **Rivets** connecting the flanges to the web at points of direct load on the flange between stiffeners shall be proportioned to carry the resultant of the longitudinal and transverse shears.

(h) **Rivets** connecting the flanges to the webs of plate girders and of columns subjected to bending shall be so spaced as to carry the increment of the flange stress between the rivets.—(As amended by Ordinance 6634.)

#### **Eccentric Loading.**

Section 49. Full provision shall be made for stresses caused by eccentric loads.

#### **Combined Stresses.**

(a) Members subject to both direct and bending stresses shall be so proportioned that the greatest combined stresses shall not exceed the allowed limits.

(b) All members and their connections which are subject to stresses of both tension and compression due to the action of live loads shall be designed to sustain stress giving the largest section, with 50% of the smaller stress added to it. If the reversal of stress is due to the action of wind, the member shall be designed for the stress giving the largest section and the connection proportioned for the largest stress.—(As amended by Ordinance No. 6634.)

Section 50. Repealed by Ordinance No. 6634.

### **Welding for Structural Steel Members**

Section 50-A. Where Electric Arc or Spot welded connection are used, subject to compression or shear, they shall be designed to have a factor of safety of 6 and in no case shall the allowable stress exceed 6000 pounds per square inch.

Where welding is used in buildings over one story high, all column connections shall be riveted and all columns and column ties shall be solid structural shapes or structural shapes assembled together with riveted connections. (Added by Ord. 7400. App. Jan. 31, 1927.)

### **Cast Iron.**

Section 51. All cast iron castings shall be made of clean, tough gray iron. They shall be free from injurious blow-holes, cold-shuts and cinder spots. Sample bars one inch square cast in sand molds, in a span of twelve inches, shall bear a central load of 2,400 pounds with a minimum deflection of one-tenth of an inch before breaking. Unit stresses on cast iron shall not exceed 16,000 pounds per square inch in compression and 3,000 pounds per square inch in tension.

### **Cast Iron Bases.**

Section 52. Cast iron bases used to distribute the loads of columns upon the foundations shall be of not less than  $\frac{3}{4}$ -inch metal. The tops of bases shall be planed and the columns bolted thereto.

### **Cast Iron Columns.**

Section 53. Columns of cast iron shall be of round or rectangular section, but no column shall be used less than five inches in diameter, or of side of rectangle less than five inches. No cast iron column shall have an unsupported length of more than twenty times its least lateral dimensions or diameter, except when forming the side of a staircase or elevator enclosure

No cast iron column shall be subjected to a greater stress per square inch than

$$1 \text{ plus } \frac{8000}{\frac{L^2}{800 d^2}}$$

for round columns where L is the length and d is the outside diameter in inches; and

$$1 \text{ plus } \frac{8000}{\frac{L^2}{1067 S^2}}$$

for rectangular columns, where L is the length and S is the least side of the rectangle in inches.

The top and bottom flanges, seats and lugs shall be of ample strength, reinforced by fillets and brackets; they shall not be less than one inch 'n thickness when finished.

The interior space of cast iron columns shall be in no case filled with any material.

All columns shall be faced at the ends to a plane surface at right angles to the axis of the column.

Where cast iron columns are placed vertically one on top of another, they shall be securely bolted together with at least four  $\frac{3}{4}$ -inch bolts, at the joints, through flanges cast on the columns. In such cases the diameter shall not vary more than 2 inches between any two columns.

The metal of the shaft of the lower column shall be increased in thickness at the top to give full bearing to the metal of the shaft of the upper column. This shall be done by tapering the metal for at least 6 inches. A joint plate at least 1 inch thick may be used in place of this taper.

The thickness of metal shall not be less than one-twelfth of the diameter or of the greatest lateral dimension of cross-section, but never less than three-quarters of an inch.



Whenever the core of a cast iron column has shifted more than one-fourth the thickness of the shell, the strength shall be computed assuming the thickness of metal all around equal to the thinnest part, and the columns shall be condemned and rejected if this computation shows the strength to be less than required by this code.

Wherever blow-holes or imperfections are found in a cast iron column which reduces the area of the cross-section at that point more than ten per cent, such column shall be rejected.

Cast iron posts or columns not cast with one open side or back, before being set up in place, shall have a three-eighths of an inch hole drilled in the shaft of each post or column, by the manufacturer or contractor furnishing the same, to exhibit the thickness of the castings; and any other hole or holes of a similar size which the Inspector of Buildings may require, shall be drilled in the said posts or columns by the said manufacturer or contractor, at his expense.

### **Loads.**

Section 54. The dead loads in buildings and structure shall consist of the actual weight of the walls, roofs, floors, partitions and all permanent construction.

The live or variable loads shall consist of all loads other than dead loads.

Floors and supports shall be designed to safely carry not less than the following loads per square foot of floor area in addition to the dead load:

Dwellings, office floors, apartment houses, tenement houses, hotels and hospitals, forty (40) pounds.

School rooms and theatres with fixed desks and seats, stables and carriage houses, seventy-five (75) pounds.

Garages, automobile salesrooms, light machine shops and department stores, one hundred (100) pounds.

All floor slabs and beams in garages, automobile salesrooms, light machine shops, department stores and office buildings shall be able to carry a 4000-pound concentrated load.

Halls of public assemblage, without fixed seats, halls of schools, theatres and hospitals, ordinary stores and floors of light manufactories, warehouses for light storage as furniture or other bulky materials, one hundred and twenty-five (125) pounds.

Stores with heavy loads, stack rooms of libraries, warehouses, ordinary manufactories, two hundred and fifty (250) pounds.

All sidewalks, one hundred fifty (150) pounds.

The strength of factory floors intended to carry running machinery and any other building intended to carry heavy or special loads shall be increased above the minimum given in this section, as may be required by the Board of Public Works.

The roofs of all buildings having a pitch of less than twenty degrees shall be proportioned to bear safely thirty pounds upon every superficial foot of their surface in addition to the weight of materials composing the same. If the pitch be more than twenty degrees the live load shall be assumed at twenty pounds upon every superficial foot measured upon a horizontal plane.

All beams or joists in the building shall be proportioned to carry the full dead and live load. In buildings used for offices, dwellings, apartment-houses, hotels, lodging-houses, hospitals, schools, halls, theatres, garages, automobile salesrooms, light machine shops and department stores, all girders shall be proportioned to carry the full dead load and at least eighty per cent of the required live load, and the column shall be proportioned to carry the full dead load and sixty per cent of the required live load. For the purpose of reducing the live load, all beams supporting over 150 square feet of floor area may be considered as girders.

In buildings used for warehouses, stores and libraries, all beams, girders and columns shall be designed to carry the full dead and live load.

Section 55. The weight placed upon any of the floors of any building shall be safely distributed thereon. The Board of Public Works may require the owner or occupant of any building or of any portion thereof to

redistribute the load on any floor or to lighten such load where it deems it necessary so to do. A tablet shall be permanently placed on each floor of each building used for commercial purposes giving the live load per square foot for which the building was designed; such tablet shall be placed in a conspicuous position.

### Weight of Materials.

Section 56. The following weights per cubic foot shall be used in calculating the dead loads:

Brick work .....	125	pounds
Concrete rock or gravel .....	145	"
Concrete of cinders .....	100	"
Steel .....	490	"
Cast iron .....	450	"
Redwood .....	48	"
Pine and fir .....	40	"
Sandstone .....	156	pounds
Granite and marble .....	165	"
Terra cotta .....	100	"
Water .....	62½	"
Asphaltum .....	100	"
Plastering, dry .....	100	"
Sand and gravel, dry.....	100	"
Sand and gravel, wet.....	130	"

The weight of other materials shall be determined from standard authorities or directly by the Board of Public Works from samples.

### Foundations and Loads on Soils.

Section 57. All foundations shall be calculated for the full column loads obtained by the loads given in Section No. 54 of this Ordinance. Soils carrying foundations shall not be loaded more than the following number of tons per square foot:

	Tons
Soft clay .....	1
Sand and clay mixed .....	2
Firm dry clay .....	3
Hard clay .....	4
Loam or fine dry sand .....	3
Compact sand .....	4

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Coarse gravel .....	6
Shale rock .....	10
Hard rock .....	20

The Board of Public Works may make investigation of special forms of foundations and issue permits for such, if approved. They may call for a test of soils, which must be made by the owner in such manner as the said Board may provide.

### **Unit Loads on Masonry.**

Section 58. The following unit loads per square foot must not be exceeded:

Brick work lime mortar .....	7 tons
Brick work cement and lime mortar.....	10 tons
Brick work cement mortar .....	15 "
Concrete .....	20 "
Granite .....	28 "

### **Foundations on Piles.**

Section 59. Walls, columns and other loads may rest upon a foundation on piles, as provided in Section 43 of this Ordinance.

### **Foundations on Rafts.**

Section 60. Buildings not over two stories in height may be founded on timber rafts made up of at least three layers of four-inch plank spiked together. Planks may be laid directly on the soil, but all timber must be below standing water line. Other forms of raft foundations may be used if approved by the Board of Public Works.

### **Foundations on Brick Work.**

Section 61. Walls, columns and other loads may rest upon a foundation of brick work built in accordance with Section 27 of this Ordinance. The faces of such foundations shall have a batter of not less than sixty degrees from a horizontal plane, taken from the ledge of column base or wall.

### **Foundations of Stone.**

Section 62. Walls, columns and other loads may rest upon a foundation of cut stone or of rubble stone ma-

sonry. The faces of such foundations shall have a batter not less than sixty degrees from a horizontal plane taken from the ledge of column base or wall. All stones used shall be of such size that no stone shall have a projection more than one-third its length. Stone to be laid in Portland cement mortar.

### **Foundations of Plain Concrete.**

Section 63. Walls, columns and other loads may rest upon a foundation of plain concrete, in which case the faces of such foundation shall have a batter not less than sixty degrees from a horizontal plane. Concrete to be in accordance with the provisions of Section 25 of this Ordinance.

### **Foundations of Reinforced Concrete.**

Section 64. Walls, columns and other loads may rest upon a foundation of reinforced concrete consisting of slabs, or beams and slabs constructed in accordance with the provisions of reinforced concrete in Class "B" buildings.

### **Foundations of Steel Grillage.**

Section 65. Walls, columns and other loads may rest upon a foundation of steel beams and girders. There shall be a layer of concrete at least six inches thick between any part of the steel and the earth.

### **Bases for Columns.**

Section 66. Columns shall rest upon cast iron or steel bases and all columns shall have some form of base plate or base, which may be leveled before placing the column. Granite levelers not less than 12 inches thick may be used.

### **Anchoring Columns.**

Section 67. Buildings where the height exceeds three times the least horizontal dimension shall have at least two anchors of  $1\frac{1}{2}$  square inches section each, fastened to column and passing into the concrete to within one foot of soil; anchor to have washer of size sufficient to develop strength of anchor. This does not apply to columns embedded in side retaining walls.

### **Shape of Foundations.**

Section 68. Foundations under columns shall be symmetrical except under wall columns, where the center line of the columns must lie within the middle third of the foundation section. In this case the intensity of pressure on soil at the wall line must not exceed the allowed limit, due consideration being taken of any wall load in addition to the column load.

### **Combined Foundations.**

Section 69. In cases where the wall column load exceeds the above provision, the column must rest upon a steel or reinforced concrete girder having an interior column or columns at the inner end. The foundation shall then be designed for the combined loads. This section does not apply to party walls and foundations.

Combined foundations or inverted arches of brick, stone or concrete masonry may be used in connecting piers or walls, in which case the arch shall be ample to support the load and the thrust taken by embedded tie-rods.

### **Special Forms of Foundations.**

Special forms of foundations, such as caissons, may be used after approval by the Board of Public Works.

### **Retaining Walls.**

Section 70. Walls sustaining the pressure of earth shall be designed in accordance with an approved formula. Reinforced concrete walls may be used, designed in accordance with the provisions for reinforced concrete in Class "B" buildings. No part of such walls shall extend beyond the curb line. Retaining walls for sidewalk areas provided with a sidewalk of steel beams and concrete shall not be less than seventeen inches wide at the top and increase one inch in thickness for every foot in height. Special forms of retaining walls with steel beams resting against the sidewalk beams may be used if of approved designs. No permanent wooden bulkhead over five feet in height shall be constructed.



### Area Walls for Hydrant Protection.

Section 71. At places where designated by the Board of Public Works the retaining walls of sidewalks shall be curved around any hydrant in such way that the hydrant is outside the wall and a clear space 3 feet 4 inches wide and 3 feet 4 inches deep from the curb line left for the hydrant. Sidewalks shall be built close up to hydrants.

### Sidewalk Construction.

Section 72. All sidewalks shall be made with a wearing surface of concrete, brick or stone laid in cement mortar or of asphaltum. Where resting directly on earth the concrete shall be at least three inches thick with a wearing surface of sand and cement in equal parts at least  $\frac{3}{4}$  of an inch thick in addition.

Sidewalks over excavated areas shall be supported on steel or reinforced concrete beams. The space between the beams shall be covered either with reinforced concrete slab at least 5 inches thick or a brick arch at least 4 inches thick. In addition there shall be a wearing surface of fine gravel and cement in equal parts at least  $\frac{3}{4}$  of an inch thick.

All sidewalks shall have a drop outward from the building line of  $\frac{1}{5}$  of an inch per foot of width.

All sidewalks shall be marked off into squares not over 3 feet to a side.

Sidewalk surfaces may be constructed of lens lights not exceeding four inches square set in cement and supported by cast or wrought iron frames or reinforced concrete beams.

## PART VI.

### CLASSIFICATION, DESCRIPTION, LIMITING DIMENSIONS AND RESTRICTIONS AS TO USE OF BUILDINGS.

Section 73. For the purpose of this Ordinance, buildings are divided into "Class A," "Class B," "Class C," "Mill Construction" and "Frame or Wooden Buildings."

### **Class "A" Buildings.**

Section 74. Class "A" buildings are defined as those having fireproof frames of steel and with all structural parts of incombustible material. Walls shall be of brick, stone, concrete or reinforced concrete.

Class "A" buildings with all wall loads above the third floor carried on the steel frame shall not be limited as to height.

Class "A" buildings with self-supporting curtain or bearing walls on the exterior shall be limited in height to 86 feet.

Class "A" buildings may be built anywhere in the city.

### **Class "B" Buildings.**

Section 75. Class "B" buildings are defined as those having a frame of reinforced concrete carrying all wall and floor loads. All structural parts shall be of incombustible material. Walls shall be of brick, stone or reinforced concrete. The maximum limit of height of Class "B" buildings shall be ten (10) stories and they may be built anywhere in the city.

### **Class "C" Buildings.**

Section 76. Class "C" buildings are defined as those having exterior walls of brick, stone or concrete and an interior frame of combustible material. The walls may be bearing or curtain walls and the interior supports may be timber joists, timber or steel girders, and timber, steel or cast iron columns or timber studding.

Class "C" buildings built with the interior of mill construction or with all joists, girders, studding, furring and soffits of stairs lathed with metal lath and plastered may be built to a height not to exceed eighty-four (84) feet.

Class "C" buildings with all joists, girders, studding, furring and soffit of stairs lathed with wooden lath and plastered, or not lathed and plastered, may be built to a height not to exceed fifty-five (55) feet.

Class "C" buildings may be built anywhere in the city.

### **Mill Construction.**

Section 77. Buildings of mill construction are defined as those with exterior walls of masonry and the interior loads supported by heavy timber frame. The frame shall be constructed without concealed air spaces.

This method of construction may be used for the interior of Class "C" buildings and be built to a height of eighty-four (84) feet.

### **Frame or Wooden Buildings.**

Section 78. Frame or wooden buildings may be constructed to a height not exceeding forty (40) feet and may be built anywhere in the City and County except within the fire limits and shall contain not more than three (3) stories and basement within the said forty (40) feet.

On sloping ground: In the case of a frame or wooden building on a lot with the ground sloping downward from the facade at which the measurement is taken, the height of the building shall not at any point exceed forty (40) feet above the curb line measured on the facade facing the street, nor shall the height of the building at any point of the grade exceed fifty (50) feet above the adjoining curb in case of corner lots, or above the level of the ground in case of inside lots, provided, however, in the case of a frame or wooden building to be used only for the residence of a single family on a lot with the grade sloping downward from the facade at which the measurement is taken the height, except at the front facade, may exceed fifty (50) feet, but there shall not be at any point more than fifty (50) feet of frame construction above the foundation. Said foundation shall be of masonry, steel frame construction or reinforced concrete construction, and no part of the area within said foundation shall be in any way occupied. And provided further that in no event shall the total height of construction at any point on the lot built upon exceed seventy (70) feet above the footings.

In no case provided for in this section shall the building at any point extend to a greater height than that of a horizontal plane forty (40) feet above the curb line on the facade fronting the street.

Provided that where frame residences on an inside lot sloping downward from the facade at which the measurement is taken exceed in any part of the grade 50 feet 0 inches above the natural level of the lot, there shall be provided a passageway at least 3 feet 0 inches wide from the rear of the lot to the street. Said passageway, if within the exterior walls of the building, must have its interior lined throughout with sheet metal or be metal lathed and plastered.

And it is further provided that in the rear of any frame residence where the height at any point exceeds 50 feet 0 inches above adjoining curb line in the case of corner lots, or above the level of the ground in the case of inside lots, there shall be a metal fire escape leading from the roof to within 8 feet 0 inches of the ground, unless there are two or more separate stairways from the upper floor to the ground; and provided further in the case of frame dwellings on inside lots whose height above the ground level exceeds 50 feet 0 inches as herein provided, the rear line of such building, exclusive of fire escapes, shall at no point be closer to the rear line of the lot than a distance equal to 15 per cent of the average depth of the lot.

### **Private Garage.**

Section 78a. One-story buildings with enclosing walls and roof of corrugated iron or galvanized sheet metal, supported on a frame of steel construction, not exceeding fifteen (15) feet in height and in area four hundred (400) square feet, may be built and be used for private garage purposes only, and may be erected only in the rear of any residence or in the rear of any lot in the City and County outside the fire limits.

### **GENERAL HEIGHT LIMITATIONS**

Section 79. The heights of buildings shall not exceed the heights given under the different classes, except that stair and elevator houses, water tanks, towers and spires may exceed the limits.

Towers and spires on Class "C" or frame buildings may extend one hundred feet above the roof, but no such tower or spire shall occupy more than one-quarter of the street frontage of the building, nor shall it have

a base area exceeding 1000 square feet. Such towers and spires shall not be used as a dwelling, place of manufacture, nor storage room and shall be covered with fireproof materials.

Towers for the purpose of filtering, cooling or purifying water, or for the purpose of mixing mortar or concrete, may be erected or constructed provided that they be erected or constructed independently of the building and to a height not exceeding seventy-five (75) feet; and that they be of heavy timber or steel construction. (As amended by Ord. 7543, app. May 25, 1927.) See Ord. 8926, app. Feb. 3, 1931; Ord. 11.084, app. July 5, 1932, and Ord. 11.089, app. Sept. 26, 1933.

### **General Limitations of Area.**

Section 80 (as approved Oct. 19, 1922). No restriction is placed on the floor area of buildings Class "A" and Class "B" construction.

In buildings of Class "C" wherever built, provided such buildings are erected and constructed on corner lots or on inside lots running through from street to street, or on lots on which private rights of way, 50 feet or more in width and connecting with the bounding street or streets, and which rights of way provide the equivalent of a corner lot or an inside lot running through from street to street and not exceeding one story and basement in height, no single floor area between exterior division or party walls shall exceed nineteen thousand (19,000) square feet. Where Class "C" buildings are erected or constructed on a lot other than a corner lot, or lot extending through from street to street, the area shall not exceed ten thousand (10,000) square feet; provided, however, should such building be erected on such a lot and be completely equipped with a system of automatic sprinklers in a manner approved by the Board of Fire Underwriters of the Pacific, the said area may be increased to not exceed fifteen thousand (15,000) square feet. No wall or part of wall in any such existing building or in any such building hereafter erected may be removed to produce a larger area than herein allowed.

Frame buildings erected on any lot shall not exceed the area of 10,000 square feet.

None of the herein designated buildings nor any part hereof shall be used as a place of storage, keeping or handling of any combustible article except under the conditions prescribed by the Ordinances of the City and County of San Francisco.

Sheds limited in area to fifteen hundred (1500) square feet shall be permitted in the fire limits, provided they conform to the requirements of Section 156 of the "Building Law."

Attics or unfinished space between the ceiling and roof rafters of every Class "C" or frame building, shall be divided into compartments or rooms in order to prevent the rapid progress of fire. Such compartments shall not have a floor area of more than twenty-five hundred (2500) square feet.—(Amended by Ordinance 5187, N. S.)

### General Restrictions as to Use.

Section 81. Theatres in any part of the city shall be of Class A construction.

Schools, hospitals, sanitariums and halls and other places of public assemblage, seating more than 1,000 persons, other than theatres, built in any part of the city, shall be of Class A or Class B construction, with columns in outer walls supporting floor and roof loads.

Department stores, warehouses and buildings without partitions, built anywhere in the city and used for the storage of merchandise shall be of either Class A, Class B or Class C construction, and shall be limited to the heights prescribed for said types of construction: **provided, however,** that no building of this character shall be constructed to a greater height than 102 feet.

Wood working mills operated by power wherever erected shall be of Class A, Class B or Class C construction.

**Stables:** All buildings used for stabling animals above the first or ground floor or in basement shall be of Class A or Class B construction.



## PART VII.

## SPECIAL PROVISIONS RELATING TO THE CONSTRUCTION OF CLASS "A" BUILDINGS.

**Description.**

Section 82. Class A buildings of unlimited height shall be built with a steel frame carrying all floor loads and all walls from the third floor up.

Class A buildings in which the height does not exceed 86 feet may have the exterior wall a bearing wall carrying the adjacent floor loads, or the exterior wall may be a self-supporting curtain wall without openings, the floor loads being carried on columns built in the wall. Cast iron columns may be used in such buildings. **Provided**, that no school, hospital, theatre, or building for public assemblage required to be fireproof, be constructed without columns built into the exterior walls which columns may carry the floor load only.

**Steel Frame.**

Section 83. No material less than  $\frac{1}{4}$ -inch thickness shall be used in any part subject to stress.

Section 84. Columns shall be proportioned in accordance with Sections 46, 47, 48, and 49 of this Ordinance. All columns in buildings over 86 feet in height shall be made up of rolled steel shapes and no columns shall be used which do not have one solid web of metal along or parallel with one axis of cross section. All columns shall extend to a foundation the top of which is not above the basement floor level, except where the load is carried on trusses or girders to other columns.

Columns shall be connected to each other by splice plates near a floor line. The splice plate must be of sufficient size to take any possible tension or shear due to wind or eccentric loading. Columns may be built in lengths of one or more stories.

Cast iron columns may be used in buildings under 86 feet in height and shall be in accordance with Sections 51, 52 and 53 of this Ordinance.

**Section 85. Repealed by Ordinance No. 6634.**

### **Limiting Distances.**

Section 86. No part of the metal of any column except connections and beam support shall be less than four inches from the outside of any exterior wall. Portions of the frame supporting walls shall not be less in width than one-half the width of the wall and the supporting part shall project to within two inches of the outer face of the wall.

### **Tie Rods.**

Section 87. Tie rods shall connect all beams where the floor construction gives rise to a thrust. Rods shall have nuts or turnbuckles for adjustment.

### **Metal Fronts, Cornices, Fire Walls, Roof Trusses.**

Section 88. Cast iron or metal fronts may be placed in front of columns of the steel frame, provided the latter and fully fireproofed.

Brackets supporting overhanging cornices, belt cornices and other projections shall be attached to the steel frame.

Parapet and fire walls shall, if over three feet high above roof, be connected to the steel frame which must be extended for that purpose.

Roof trusses under 45 feet span may rest on brick walls. Spans over 45 feet shall rest on steel columns.

### **Wind Bracing.**

Section 89. In buildings over one hundred and two feet high, or where the height exceeds three times the least horizontal dimension, the following provisions of this section shall apply:

The steel or concrete frame shall be designed to resist a wind force of 15 pounds per square foot acting in any direction upon the entire exposed surface.

The combined dead load, live load and wind load stress shall not exceed the permissible dead and live load stress by more than 33 1/3 %.

In no case shall the overturning moment due to wind exceed 50 per centum of the moment due to the weight of the structure. All exterior wall girders shall have knee-brace connections to columns. Provisions shall

be made for diagonal, portal or knee-bracking to resist wind stresses, and such bracing shall be continuous from top story to and including basement.

### **Walls.**

Section 90. The exterior party or division walls where carried on the steel frame shall be of brick, reinforced concrete, concrete blocks, stone or terra cotta. Where self-supporting walls are used they shall be of brick or plain concrete. All walls shall be anchored to frame at spaces not exceeding 5 feet with  $\frac{3}{4}$ -inch anchors with 6-inch square heads.

Outside of fire limits sheet metal may be used in buildings used for purposes of manufacture other than wood-working.

### **Brick Walls.**

Section 91. Brick walls when supported on the steel frame or in the first and second story, shall be at least 13 inches thick unless reinforced, except that if used in the basement they shall be 17 inches thick. Stone or terra cotta veneer shall not be counted part of this thickness. If the height of a supported wall exceeds 24 feet or the area between supporting girders and columns exceeds 400 square feet the thickness shall be made 17 inches.

Self-supporting curtain walls of brick built in between columns supporting floor loads may be used in Class A buildings of a height not over 86 feet. Said curtain walls shall be 21 inches thick in basement, 17 inches thick for a height of 46 feet above the first floor and 13 inches thick for the remaining height. No openings shall be made in curtain walls.

Self-supporting bearing walls of brick may be used in Class A buildings of a height not over 86 feet. Such walls shall be of a thickness as given in Section 133 of this Ordinance relating to Class C buildings. Such walls may be used to carry adjacent floor loads, provided that the adjacent interior column is not more than 20 feet from the bearing wall.

### **Reinforced Concrete Walls.**

Section 92. Walls of reinforced concrete shall be permitted in Class A buildings provided they be con-

structed in accordance with Section 116 of this Ordinance relating to Class B buildings, except that they shall be supported on steel columns and beams instead of reinforced concrete.

Concrete made with broken brick or terra cotta or cinders instead of broken stone will be permitted in Class A buildings.

### **Concrete Block Walls.**

Section 93. Concrete blocks shall be of dense concrete with courses not over 12 inches high, except in ornamental courses. Walls shall be at least 12 inches thick. Blocks shall be of concrete at least 2 inches thick at all parts, and shall be made interlocking and set in Portland cement mortar. The area of opening in blocks shall not exceed 1-3 of the total cross sectional area of the block. Walls shall be supported on the frame at each floor level.

### **Terra Cotta.**

Section 94. Terra cotta blocking may be used in outside walls and in courts. On outside walls it shall be set in cement mortar and tied to the steel frame by anchors of at least one-half inch diameter round i.on.

Window mullions of terra cotta shall have a vertical steel member enclosed and connected to the steel frame.

Terra cotta blocks shall be set in courses not over 12 inches deep except in ornamental courses. Walls shall be at least twelve inches thick and supported on the steel frame at each floor level.

### **Reinforced Block or Brick Walls.**

Section 95. Walls of concrete blocks, tile or brick may be built of a thickness not less than eight inches, provided that in all walls over 200 square feet between supporting girders and columns vertical steel rods not less than one-half of an inch diameter and spaced not over 24 inches apart, horizontally, are used to reinforce the walls. Such rods must be rigidly attached to the steel frame at each floor. Interlocking hollow tile walls may be used and may be built of a thickness not less than eight inches. Vertical or horizontal reinforcement may be used. If vertical reinfocing is used the same

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shall comply with requirements of similar reinforcing for brick walls; if horizontal reinforcement is used members shall be steel one-quarter inch by one and one-quarter inch spaced not more than twenty-eight inch centers. These members shall be rigidly attached to the building frame by an approved band to prevent lateral movement. Vertical reinforcement shall be provided around all openings in eight-inch brick, tile or concrete block walls. No eight-inch walls shall be built of a height exceeding 18 feet in each story. If the area of wall surface included between two adjacent wall columns and adjacent floor girders exceeds 400 square feet, the thickness of the wall shall be not less than twelve inches, and all joints shall be broken horizontally and vertically across the wall. When interlocking hollow tiles are used on the inner facing of a hard selected brick wall the tiles and brick shall be bonded together with solid brick headers at least every seventh course of brick, and such walls shall be estimated as laid up with kiln run brick.

### **“Interlocking Hollow Tile.”**

Section 95a. The term “interlocking hollow tile” is hereby defined to mean a tile made of shale, fire or other clay which, when burned shall be free from undue checking or warping and shall be fashioned so that when laid in the wall, each unit locks or bonds into the opposite tile or tiles, or into the tiles immediately below or above. Interlocking hollow tiles shall conform to the following requirements: They shall be burned to such density that in a forty-eight hour test they will not absorb moisture exceeding twelve per cent of their weight. They shall develop an ultimate crushing strength of not less than fifteen hundred pounds per square inch of their bearing members. The allowable stress shall not exceed one hundred fifty pounds per square inch of net area of bearing members. Bearing members herein mentioned, shall mean only such vertical webs or walls of said tiles as will rest on thorough mortar beds and stand in complete vertical alignment with vertical members of the adjacent interlocking hollow tile below.



The vertical webs and shells of all interlocking hollow tiles used for all bearing walls shall be in thickness at least twenty per cent of the cross section measurement of the void they enclose.

### **Light Court and Vent Shaft Walls and Openings.**

Section 96. The walls of all outer courts and shafts and lot line courts and shafts and of all courts and shafts the area of which exceeds 50 square feet shall be of the same construction as the outer walls of the building.

The walls of all other courts and shafts of an area less than 50 square feet may be of the same construction as allowed for partition but they must be plastered on outside.

### **Floor and Roof Construction.**

Section 97. The structural part of floors and roofs may be built of terra cotta, brick, steel, or of concrete made of stone, broken brick, cinders or other concrete. The slabs or arches shall be proportioned to carry loads 20 per cent greater than required for the supporting steel beams of the frame.

### **Terra Cotta Floors.**

Section 98. Segment floor arches built of terra cotta shall have a rise of not more than 1-10 the span for the arch portion, not less than 4 inches for spans up to six feet, nor less than 6 inches for spans up to ten feet. Spans over ten feet are prohibited. No arch shall be less than 4 inches thick.

Arches shall be constructed so that the key block shall fall in the center and the shells and webs always abut against each other.

Flat arches shall have spans not exceeding ten feet and the depth of the tile shall not be less than one and three-quarter inches for each foot of span.

### **Brick Arch Floors.**

Section 99. Brick laid in cement lime mortar may be used for floors up to ten feet span. The rise shall be 1-9 the span with 4 inches crown thickness for spans up to six feet and 8 inches crown thickness for spans up to ten feet.

### Reinforced Concrete Floors

Section 100. Floors of reinforced concrete built in conformity with the requirements for reinforced concrete as outlined under Class B Buildings may be built in Class A Buildings.

No concrete slab shall have a span exceeding sixteen (16) feet and in buildings over 86 feet in height no slab shall be over ten (10) feet span.

No slab or stone concrete shall be less than three and one-half inches thick except roof slabs, which may be three inches thick. Slabs over eight feet span and less than twelve feet span shall not be less than 4½ inches thick. Slabs over twelve feet span shall not be less than 5 inches thick. Slabs may be built of concrete in which broken brick, terra cotta or cinders are used in place of stone, provided they are made not less than 4 inches thick for floors and not less than 3½ inches thick for roofs.

Where supporting steel beams are not more than 24 inches, center to center, and the superimposed load does not exceed 125 pounds per square foot, roof and floor slabs may be constructed not less than 2 inches thick of Portland Cement concrete with stone, brick, terra cotta or cinder aggregate.

Such slabs may be supported on a rib metal reinforcing lath weighing not less than 4 pounds per square yard. If not supported on rib metal lath the 2-inch slab shall be reinforced with .06 square inches of steel per foot of width transverse to the beams and .015 longitudinal.

Such 2 inch slab construction shall be limited to 12 stories above the sidewalk or to the upper 12 stories of buildings, 13, 14 or 15 stories above the sidewalk. (Amended by Ord. 7400. App. Jan. 31, 1927.)

### Special Floors

Section 101. Floors may be built of lens light not exceeding four inches square each, set in cement and constructed in a manner similar to sidewalk construction.

Floors of iron plates resting on steel supports may be used in boiler rooms.

Floors of special design must be submitted to the Board of Public Works for approval.

### Floor Covering

Section 102. The wearing surface of the floors shall rest on the structural part and may consist of a cement finish, terrazzo, marble, tile, encaustic or other tile, wood resting upon sleepers fastened to the structural part with concrete filling or other material approved by the Board of Public Works.

### Hardwood Floors

Section 102-A. Hardwood floors shall be laid upon a sub-flooring of at least merchantable T. and G. pine flooring or pine boards not more than six (6) inches in width, and not less than seven-eighths ( $\frac{7}{8}$ ) of an inch in thickness, surfaced one side and edge, and laid as tightly as possible, and to be double nailed on each floor joist to obtain a smooth and even surface. These conditions shall apply to hardwood floor construction in all types of buildings. As amended by Ord. 8701 (N. S.) app. March 10, 1930.

### Fireproofing

Section 103. All parts of the steel frame, including cast iron columns, shall be covered with fireproofing. The fireproofing shall be continuous and no pipes of any description shall be laid in any fireproofing, nor shall any fireproofing be cut to allow the passage of any pipe or duct through any part except floor slabs.

In roofs where space is left between the ceiling and roof beams, fireproofing may be omitted from the steel frame, except around columns, and where columns project above the roof they shall be fireproofed, but this shall not apply to the exposed beam supporting tanks, etc.

In floor slabs where air space is left between the floor slab and ceiling, and said ceiling is not less than  $\frac{3}{4}$  inch thick, composed of a scratch coat of Portland cement plaster  $\frac{1}{4}$  inch thick and two coats of gypsum plaster, supported on metal lath, fireproofing may be omitted from the steel frame except around columns

and beams and girders framing into columns. (Amended by Ord. 7400. App. Jan. 31, 1927.)

### **Column Fireproofing.**

Section 104. All columns shall be protected at all places with a layer of concrete, brick, terra cotta, or metal lath and plaster. If of concrete the fireproofing shall be of such thickness as to fill all outer spaces of the columns and to extend at least three inches outside of the extreme metal of the columns. Concrete may be made of broken stone, broken brick, broken terra cotta or cinders, no part of which shall be over one inch in major dimensions.

A mesh of metal lath or other form of metal reinforcement shall be placed in this concrete not less than one inch from the outer surface thereof.

If the fireproofing is made of terra cotta it may be of either dense, semi-porous or porous blocks not less than four inches thick. A space of one inch shall be left between the metal of column and the inside of the terra cotta, which space shall be filled with concrete grouted in.

Terra cotta shall be set in cement mortar and the blocks fastened with metal ties of approved pattern.

If the fireproofing be of brick it shall be at least  $2\frac{3}{4}$  inches thick outside of the column metal and set in cement mortar. The main reentrant portions of the columns shall also be filled with brick.

If the fireproofing be of metal lath and plaster it shall be of the double forms. Lath shall be strapped around the steel column and plastered with cement mortar or hard wall plaster. A second sheathing of lath shall be placed outside of the first, separated therefrom by an air space of at least one and one-half inches. The outer sheathing of lath shall be rigidly supported by the column and covered with cement mortar.

A partition will be considered as a substitute for the outer sheathing.

### **Fireproofing of Beams and Girders.**

Section 105. Fireproofing of the floor beams, girders and other parts of the steel frame shall be made in the

same manner as specified for columns except that all steel shall be covered at least two inches in its extreme parts.

Soffits of beams and girders protected by concrete shall have a metal mesh embedded in the concrete and bent around the flanges of the beams as a support.

If such fireproofing be of terra cotta, the concrete filling required on columns may be omitted around beams and girders. Soffits of beams shall be protected by at least two inches of terra cotta, which shall be locked into the arches or around the flanges of the beams.

### Partitions.

Section 106. Partitions may be built of brick, solid concrete, reinforced concrete, metal lath and plaster on metal studs, terra cotta, plaster blocks or other forms approved by the Board of Public Works.

No partition shall rest upon a wooden floor, but must be carried down to the incombustible material below.

Brick partitions shall be laid as walls and the thickness shall not be less than 8 inches.

Solid plain concrete partitions shall not be less in thickness than 1-30 of the height.

Reinforced concrete partitions shall not be less in thickness than 1-60 of the height.

Plastered partitions shall have a base of metal studs and metal lath. Up to a height of twelve feet solid partitions two inches thick with one layer of lath may be used. For greater heights studs with two layers of lath shall be used. The depth of the studs shall be at least 1-60 of the height of the partition.

No grounds for fastening wooden parts shall be inserted in the plaster which must be continuous from floor to ceiling.

Terra cotta partitions shall have the blocks set in cement line mortar and fastened with iron clips. Thickness of terra cotta shall be at least 1-40 of the height of partitions, provided, however, that where galvanized wire cloth,  $2\frac{1}{2}$  meshes to the inch of No. 20 wire or galvanized expanded metal lath of 26 gauge is used on

each course of terra cotta, the full length of partitions, the thickness shall be at least 1-60 of the height of partitions. When interlocking terra cotta tile is used, metal clips and wire mesh reinforcement may be omitted.

Plaster block partitions shall be built of solid plaster blocks of a thickness at least 1/40 of the height of partitions and dowelled at top and bottom of each block.

### Ceilings.

Section 107. Ceilings shall be made of reinforced concrete, terra cotta tile, metal lath and plaster or other approved forms. If of reinforced concrete or terra cotta tile, the provisions relating to floors shall apply. If the ceilings be of metal lath and plaster the lath shall be suspended from the floor or ceiling beams by a rigid frame work, to which the lath shall be firmly applied.

### Wood, Lath or Plaster Board

Section 107A (as approved Sept. 27, 1922). Whenever in this Ordinance, which is known as "The Building Law" of the City and County of San Francisco, metal lath is required, there may be used in lieu thereof plaster board composed of pure gypsum, wood and Manila fiber, or of other similar materials, but not less than seventy-five per cent (75%) of such composition shall be of non-inflammable material. Excepting that in Class A and B buildings the use of plaster board is prohibited in all elevator shafts and in the walls and ceilings surrounding staircases in such buildings.

Such plaster board shall be not less than three-eighths inch ( $\frac{3}{8}$ " ) in thickness, and shall be so constructed as to form a mechanical key or bond between the plaster board and the finish plaster. Such mechanical key or bond shall be equally distributed and shall compose at least twenty per cent (20%) of the surface of the plaster board.

On wood joists, furring strips, studding or other wood supports the plaster board shall be securely fastened by means of nails of such length that the said nails extend at least three-quarter inch ( $\frac{3}{4}$ " ) into the joists, furring strips, studding or other supports. Such nails shall be spaced or driven not more than six



inches (6") apart in one direction and sixteen inches (16") apart in the other direction. Where the furring strips, studs or other supports are of metal, the plaster board shall be securely fastened to same with galvanized iron wire of not less than No. 14 gauge or with metal clips or nails, spaced the same as in this section provided for nails. All wire nails used for fastening plaster board shall be at least No. 11 gauge with a flat head not less than three-eighths inch ( $\frac{3}{8}$ " ) in diameter.

All such plaster board shall have applied thereon at least two (2) coats of hardwall plaster to a minimum thickness of  $\frac{3}{8}$ " except that when such plaster board shall be so constructed as to have a mechanical key for a proper holding of a mortar coat, then two (2) coats of lime mortar to which has been added Keene Cement in the proportion of two hundred (200) pounds of Keene Cement to one (1) cubic yard of lime mortar, to a minimum thickness of  $\frac{3}{8}$ " may be used in lieu of the hardwall plaster coats as herein provided. Sufficient time must elapse to allow the scratch coat to thoroughly dry and harden before the brown coat is applied.

The mortar herein provided for must be mixed at a standard mortar mixing plant or place where the same is to be used, in the proportions herein specified, and it shall be the duty of the corporation co-partnership or individual operating such plant, or mixing said mortar, to notify the Board of Public Works of the time and place each individual job where such mortar is to be mixed, and the Board of Public Works shall at once cause the same to be inspected and, if found to be in compliance with this Ordinance, shall make and deliver a certificate or report of such inspection to the corporation, co-partnership or individual that performed said work, otherwise the mortar shall not be used.

A plaster board not less than one-quarter ( $\frac{1}{4}$ ) inch in thickness and otherwise conforming to the provisions of this Ordinance may be used, providing, however, the board is of sufficient strength so as to be handled in lengths up to twelve (12) feet. (As amended by Ordinance 6095, N. S.)

Section 107B. Whenever in this Ordinance, which is known as the "Building Law" of the city and County of San Francisco, wood lath is required, or plaster board as described in Section 107A (as adopted February 21, 1921), is required, there may be used in lieu thereof, except in Class "A" and "B" buildings, an all steel lath weighing not less than three and two-tenths (3.2) pounds per square yard and dipped in a non-corrosive paint, with deformed unperforated ribs not less than one-half inch wide and spaced not over five-eighths inch apart; the ribs to be connected by means of an open mesh or deformed metal with length of openings not greater than distance apart of the ribs.

The steel lath to be firmly applied to the wood joists, furring strips, studs or supports with 3d fine blue nails or one-tenth staples. Spacing of nails or staples to be not more than six (6) inches apart in one direction, and sixteen (16) inches apart in the other direction.

In the application of steel lath to board or plank surfacing the same should be raised therefrom by steel furring strips; spacing of nails or staples to be same as that given for wood supports.

Where joists, studding, furring strips or other supports are of metal, the steel lath shall be securely fastened to same with galvanized iron wire not less than 18 gauge, spacing to conform to that given for nails or staples in use on wood supports.

All such metal lath shall have applied thereon, to a minimum of one-half inch grounds, at least two (2) coats of hardwall plaster, or in lieu thereof, two (2) coats of lime mortar to which has been added Keene Cement in the proportion of two hundred (200) pounds of Keene Cement to one (1) cubic yard of lime mortar. (As approved August 24, 1923, Ordinance No. 5980).

## PART VIII.

### SPECIAL PROVISIONS RELATING TO THE CONSTRUCTION OF CLASS "B" BUILDINGS.

Section 108. Class "B" buildings shall have a complete frame of columns, girders and beams made of reinforced concrete. The structural parts of the floors

shall be of reinforced concrete and the walls may be of reinforced concrete, brick, terra cotta or concrete blocks. Steel roof trusses constructed in accordance with the requirements for Class "A" buildings shall be permitted in Class "B" buildings.

### **Materials—Tests and Allowable Stresses.**

Section 109. The concrete shall be mixed in the proportion of not less than one (1) part of Portland cement to seven and one-half ( $7\frac{1}{2}$ ) parts of aggregates, measured separately, consisting of sand and gravel or broken stone of not more than one and one-quarter-inches ( $1\frac{1}{4}$ " ) major dimension for curtain walls, columns, slabs, girders and beams, and two and one-half inches ( $2\frac{1}{2}$ " ) for heavy walls and foundations. In no case shall the total amount of bank sand in any mixture of concrete exceed twenty-five per cent (25%) of the total sand.

For the purposes of this Ordinance the stresses given in the following table shall be considered as the ulti-

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mate compressive strengths in pounds per square inch at an age of twenty-eight (28) days of the various proportions of concrete indicated.

TABLE OF ULTIMATE COMPRESSIVE STRENGTHS OF DIFFERENT MIXTURES OF CONCRETE

	1 to 3	1 to 4½	1 to 6	1 to 7½
Aggregate .....	3300	2800	2200	1800
Granite, trap rock .....				
Gravel, hard limestone and hard sandstone .....	3000	2500	2000	1600
Hard burned clay products, impervious to water, direct from kiln, free from mortar .....	2700	2200	1800	1400
Soft limestone and sandstone .....	2220	1800	1500	1200

The ratios indicate the proportion of cement to the combined volume of fine and coarse aggregate measured separately.

The following permissible stresses shall not be exceeded in concrete:

### **Bearing.**

When compression is applied to a surface of concrete of at least twice the loaded area a stress of 35% of the ultimate compressive strength will be allowed in the area actually under load. Under other conditions the bearing stress shall not exceed the stress permitted in these ordinances for longitudinally reinforced columns without hooping.

### **Columns in Axial Compression.**

For concentric compression on a plain concrete pier, the length of which does not exceed four (4) diameters and on a column reinforced with banded longitudinal bars only whose unsupported length does not exceed twelve (12) diameters, a stress of 22.5% of the ultimate compressive strength will be permitted. Where hooping is used in addition to the longitudinal reinforcement, a stress of thirty-five per cent (35%) of the ultimate compressive strength will be permitted provided the unsupported length of the column does not exceed ten (10) diameters.

### **Transverse Bending Stresses.**

An extreme fibre stress of 32.5% of the ultimate compressive strength will be permitted in members subjected to bending. Adjacent to support of continuous beams a stress of 37.5% of the ultimate compressive stress will be permitted.

### **Combined Stresses.**

Where columns are designed to take the moments of slabs, beams or girders framing thereto, a combined stress of 37.5% of the ultimate compressive strength will be permitted.

### **Shearing Stresses.**

In beams reinforced with stirrups looped about longitudinal bars or beams with the longitudinal bars bent

to take shear, a stress of  $4\frac{1}{2}\%$  of the ultimate compressive strength will be permitted. Where both stirrup and bent-up bars are used, a stress of 6% of the ultimate stress will be permitted.

For punching shear, a stress of 6% of the ultimate compressive strength will be permitted.

### Bond Stress.

The bond stress between concrete and plain reinforcing bars shall not exceed 4% of the ultimate compressive strength of the concrete and between concrete and deformed reinforcing bars it shall not exceed 5% of the ultimate compressive strength of the concrete.

### Modulus of Elasticity.

The modulus of elasticity of various concrete shall be assumed as follows:

For concrete of ultimate strength less than 2200 lb. sq. in.—2,000,000 lb. sq. in.

For concrete of ultimate strength between 2200 lb. sq. in. and 2900 lb. sq. in.—2,500,000 lb. sq. in.

For concrete of ultimate strength over 2900 lb. sq. in.—3,000,000 lb. sq. in.

### Tensile Stress.

The concrete shall not be designed to take tensile stresses.

Tension in reinforcing steel shall not exceed 16,000 lb. sq. in.

Tension in reinforcing steel in combined footing shall not exceed 18,000 lb. sq. in.

Tension in cold-drawn wire shall not exceed 20,000 lb. sq. in.

Steel shall bend, when cold, through an angle of 100 degrees around a radius equal to five times the thickness of the test piece, without fracture on the outer circumference. The fracture shall be silky or fine granular. All steel shall be free from dirt, paint and excessive scale and rust.—(As amended by Ordinance 5229, N. S.)



## DESIGN IN GENERAL

### SIMPLE BEAMS.

Section 110. All simple beams shall be designed to resist the bending resulting from the loads without exceeding the stresses given in Section 109.

### RESTRAINED BEAMS.

All continuous and restrained slabs, beams and girders shall be designed to resist, at all supports, the full moments and, between all supports,  $\frac{4}{3}$  of the moments resulting from all spans being fully loaded. In no case, however, shall the resisting moments between supports be less than the bending moments produced by any condition of partial loading.

Square floor slabs reinforced in two directions shall be designed for one-half the total dead and live loads in each direction.

The moment of resistance of any reinforced concrete construction under transverse loads shall be determined by formulas based on the following conditions:

(a) The bond between the concrete and steel is sufficient to make the two materials act together as a homogeneous solid.

(b) The strain in any fibre is directly proportionate to the distance of that fibre from the neutral axis.

(c) The modulus of elasticity of the concrete remains constant within the limits of the working stresses fixed in this Ordinance.

The dimensions of such a beam or girder and its reinforcement shall be determined and fixed in such a way that the strength of the metal in tension shall measure the strength of the beam or girder. If the concrete in compression, including the allowable concrete in adjoining floor construction does not afford sufficient strength for that purpose, the compression side of the beam or girder in question shall also be reinforced with metal.

All beams or girders shall be reinforced with metal, if necessary, for other reactions.

Neither the reinforcing metal nor the concrete shall be subjected to combined stress in the same place so as to exceed in combination the stresses allowable separately.—(As amended by Ordinance 5229, N. S.)

### REINFORCEMENT.

Section 111. If it is necessary to splice reinforcing members, either in tension or compression, sufficient lap shall be provided so as not to exceed the bond stresses provided in Section 109.

Steel shall be imbedded in concrete so that the thickness of concrete covering outside of steel shall be as follows:

For flat slabs, not less than three-fourths ( $\frac{3}{4}$ ) of an inch.

For columns and beams, not less than one and one-half ( $1\frac{1}{2}$ ) inches.

For foundations, not less than three (3) inches from earth at sides and top, and four (4) inches from earth at bottom of footing.

Where the shape of the reinforcement is such that it does not give sufficient bond to the concrete insulation, such reinforcement shall be wrapped with wire or otherwise prepared as required in Section 104 for fire-proofing of structural steel.

Any concrete structure or floor filling in same, reinforced or otherwise, which may be erected on a permanent centering of sheet metal, or metal lath and curved bars, or a metal centering of any form, must be strong enough to carry its loads without assistance from the centering, unless the concrete is so applied as to protect the centering as herein specified for reinforcing steel.

Exposed metal centering or exposed metal of any kind will not be considered as a factor in the strength of any part of any concrete structure and a plaster finish applied over the metal shall not be deemed sufficient protection.—(As amended by Ordinance 5229, N.S.)

### Floor and Roof Slabs.

Section 112. The general provisions as to design shall hold for floor and roof slabs, which shall be of reinforced concrete. No floor slab shall be less than  $3\frac{1}{2}$  inches thick. No roof slabs shall be less than 3 inches thick.

The covering may be wood, marble, cement, tile or other material, but such covering shall not be considered as part of the thickness required for slabs.

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The floor slab to the extent of not more than five times its depth on each side of a beam or girder may be taken as a part of said beam or girder in computing the moment of resistance of the beam or girder, but the beam and slab must be built at the same time as a unit.

Where beams, girders and slabs connect in such a way that there is a corresponding member on the opposite side of each support they shall be designed as continuous. Wherever possible, beams and girders and also their intermediate floor construction shall be made continuous. Reinforcing metal shall be used for that purpose in the top of all connecting members at the point of support, and it shall be sufficient both in section and length to prevent fracture at the point of support when the connecting members are carrying twice their calculated loads.

Continuity or separate reinforcing material may be used in the top of the slab. In either case, however, if a part of the slab is considered as a part of the beam or girder, the reinforcing material must cross the full

width both of the beam or girder and the part of the slab so considered.—(As amended by Ordinance 5229, N. S.)

### Design of Columns.

Section 113. Columns of reinforced concrete shall not have an unsupported length exceeding fifteen times the least horizontal dimensions, which shall not be less than 10 inches.

In computing the strength of columns the  $1\frac{1}{2}$  inches of concrete nearest the surface shall be deducted from the area of concrete.

All columns shall have vertical steel reinforcing members, the net area of cross section of which shall be at least one per cent and not more than five per cent of the area of concrete in cross section where rods are used. These members shall be stayed against buckling at points whose distance apart does not exceed the least diameter of the column nor 16 diameters of the rod.

The stays shall have an area of at least five-one-hundredths of a square inch. Where structural shapes are used for reinforcing, they shall be designed as provided for similar members in Class "A" buildings, and any concrete calculated to take compressive stress shall be enclosed in said reinforcement or otherwise reinforced as herein provided.

Vertical reinforcing members which are considered in compression shall have joints only at floors or other points of lateral support.

Columns which are hooped with steel near the outer surface in the shape of circular hoops or of helical cylinder, and if the minimum distance apart of the hoops, or the pitch of helix does not exceed one-tenth of the diameter of the hooped or helical cylinder, may have the strength assumed as the sum of the following elements.

1. The area of the concrete inside the hoops at  $3\frac{1}{2}\%$  of the ultimate strength in direct compression in pounds per square inch.

2. The compressive resistance of the longitudinal steel shall be assumed to be that given by a stress in

the steel equal to the stress in the surrounding concrete multiplied by the ratio of the modulus of elasticity of the steel to that of the concrete.

3. The hooping is to be designed of a strength to resist the tension due to a unit lateral pressure of one-fifteenth the unit compression stress on the concrete. Splices in hooping, if required, and anchoring of same shall develop full strength of hooping.—(As amended by Ordinance 5229, N. S.)

### Flat Slabs.

Section 113A. 1. DEFINITION—Flat slab as understood by this ruling are reinforced concrete slabs, supported directly on reinforced columns with or without plates or capitals at the top, the whole construction being hingeless and monolithic without any visible beams or girders. The construction may be such as to admit the use of hollow panels in the ceiling or smooth ceiling with depressed panels in the floor.

2. The column capital shall be defined as the gradual flaring out of the top of the column without any marked offset.

3. The drop panels shall be defined as a square or a rectangular depression around the column capital extending below the slab adjacent to it.

4. The panel length shall be defined as the distance c. to c. of columns of the side of a square panel, or the average distance c. to c. of columns of the long and short sides of a rectangular panel.

5. COLUMNS—The least dimension of any concrete column shall be not less than one-twelfth the panel length, nor one-twelfth the clear height of the column, except that columns supporting symmetrical roof loads only may be one-sixteenth ( $1/16$ ) the panel length.

6. SLAB THICKNESS—The minimum total thickness of the slab in inches shall be determined by the formula:

$t$  equals  $W^{1/2}/44$  (equals square root of  $W$  divided by 44), where  $t$  equals total thickness of slab in inches,  $W$  equals total live load and dead load in pounds on the

panel, measured c. to c. of columns. Where the stress in the steel is 20,000 lb. per sq. in., the thickness of the slab shall be  $t$  equals  $W^{1/2}/41$ .

7. In no case shall the thickness be less than  $1/32$  of the panel length ( $L/32$ ) for floors, nor  $1/40$  of the panel length ( $L/40$ ) for roofs ( $L$  being the distance c. to c. of columns).

8. In no case shall the thickness of slab be less than 6 in. for floors or roofs.

9. COLUMN CAPITAL—When used the diameter of the column capital shall be measured where its vertical thickness is at least  $1\frac{1}{2}$  in. and shall be at least 0.225 of the panel length.

The slope of the column capital shall nowhere make an angle with the vertical of more than 45 deg. Special attention shall be given to the design of the column capital in considering eccentric loads, and the effect of the wind upon the structure.

10. DROP PANEL—When used, the drop panel shall be square or circular for square panels, and rectangular or elliptical for oblong panels.

11. The length of the drop shall not be less than one-third of the panel length ( $L/3$ ) if square, and not less than one-third of the long or short side of the panel respectively, if rectangular.

12. The depth of the drop panel shall be determined by computing it as a beam, using the negative moment over the column capital specified elsewhere in this rule.

13. In no case, however, shall dimensions of the drop panel be less than required for punching shear along its perimeter, using the allowable unit shearing stresses specified below.

14. SHEARING STRESSES—The allowable unit punching shear on the perimeter of the column capital shall be  $3/50$  of the ultimate compressive strength of the concrete as given in Section 109 of the Building Law. The allowable unit shear on the perimeter of the drop panel shall be 0.03 of the ultimate compressive strength of the concrete. In computing the shearing



strength for the purpose of determining resistance to diagonal tension the method specified by the Ordinance shall be used.

15. **PANEL STRIPS**—For the purpose of establishing the bending moments and resisting moments of square panels, the panel shall be divided into strips known as strip A and strip B. Strip A shall include the reinforcement and slab in a width extending from the center line of the column for a distance each side of this center line equal to one-quarter of the panel length. Strip B shall include the reinforcement and slab in the half width remaining in the center of the panel. At right angles to these strips, the panels shall be divided into similar strips A and B having the same width and relation to the center line of the columns as the above strips. These strips shall be for designing purposes only, and are not intended as the boundary lines of any bands of steel used.

16. These strips shall apply to the system of reinforcement in which the reinforcing bars are placed parallel and at right angles to the center line of columns, hereinafter known as the two-way system, and also to the system of reinforcement in which the reinforcing bars are placed parallel, and at right angles to and diagonal to the center line of columns hereinafter known as the four-way system.

17. Any other system of reinforcement in which the reinforcing bars are placed in circular, concentric rings and radial bars, or systems with steel rods arranged in any manner whatsoever, shall comply with the requirements of either the two-way or four-way herein specified.

18. **BENDING MOMENT CO-EFFICIENTS, INTERIOR PANELS, TWO WAY SYSTEM**—In panels where standard drops and column capitals are as above specified, the negative bending moment, taken at a cross section of each strip A at the edge of the column capital, or over it, shall be taken as  $WL/30$ .

19. The positive bending moment taken at a cross section of each strip A midway between column centers shall be taken as  $WL/60$ .

20. The positive bending moment taken at a cross section of each strip B in the middle of the panel shall be taken as  $WL/120$ .

21. The negative bending moment taken at a cross section of each strip B on the center line of the column shall be taken as  $WL/120$ .

22. In the formulas hereabove given  $W$  equals total live and dead load on the whole panel in pounds.  $L$  equals panel length, c. to c. of columns.

23. BENDING MOMENT CO-EFFICIENTS, INTERIOR PANEL, FOUR-WAY SYSTEM—In panels where standard drops and column capitals are used as above specified, the negative bending moment, taken at a cross section of each strip A at the edge of the column capital, or over it, shall be taken as  $WL/30$ .

24. The positive bending moment taken at a cross section of each strip A, midway between column centers, shall be taken as  $WL/80$ .

25. The positive bending moment taken at cross section of each strip B, taken in the middle of the panel, shall be taken as  $WL/120$ .

26. The negative bending moment taken at a cross section of each strip B, on the center line of the column, shall be taken as  $WL/120$ .

27. BENDING MOMENT CO-EFFICIENTS, WALL PANELS—Where wall panels with standard drops and capitals are carried by columns and girders built in walls, as in skeleton construction, the same co-efficients shall be used as for an interior panel, except as follows: The positive bend moments of strips A and B and midway between wall and first line of columns shall be increased 25%; provided, however, that the wall panels may be designed for the same moments as the interior panels, if the wall column is designed to take the full bending moment produced on the column, assuming the slab to be fixed at the wall support.

28. Where wall panels are carried on new brick walls, these shall be laid in Portland cement mortar and shall be stiffened with pilasters as follows: If a 16-in. is used it shall have a 4-in. pilaster. If a 12-in. wall is used, it shall have an 8-in. pilaster. The width of pilaster shall be not less than the diameter of the column, nor less than one-eighth of the distance between pilas-

ters. The pilasters shall be located opposite the columns as nearly as practicable, and shall be corbeled out 4 in. at the top, starting at the level of the base of the column capital. Not less than 8-in. bearing shall be provided for the slab, the full length of wall.

The co-efficients of bending moments required for these panels shall be the same as those for the interior panels except as provided herewith: The positive bending moments on strips A and B midway between the wall and first line or columns shall be increased 50%.

29. Where wall panels are supported on old brick walls, there shall be columns with standard drops and capitals built against the wall, which shall be tied to the same in an approved manner, and at least an 8 in. bearing provided for the slab, the full length. Where this is impracticable, there shall be built a beam on the under side of the slab adjacent to the wall between columns strong enough to carry 25% of the panel load.

The co-efficients of bending moments for the two cases of slab support herein described shall be the same as those specified in Section 27 and Section 28 for skeleton and wall bearing condition, respectively.

30. Nothing specified above shall be construed as applying to a case of slabs merely resting on walls or ledges, without any condition of restraint. These shall be figured as in ordinary beam and girder construction specified in the Ordinances.

31. BENDING MOMENT CO-EFFICIENTS, WALL AND INTERIOR—Wall columns in skeleton construction shall be designed to resist a bending moment of  $WL/60$  at floors and  $WL/30$  at roof. The amount of steel required for this moment shall be independent of that required to carry the direct load. It shall be placed as near the surfaces of the column as practicable, on the tension sides, and the rods shall be continuous in crossing from one side to another. The length of the rod below the base of the capital and above the floor line shall be sufficient to develop their strength through bond, but not less than 40 diameter, nor less than one-third the clear height between the floor line and the base of the following capital.

32. The interior columns must be analyzed for the worst condition of unbalanced loading. It is the in-

tention of this ordinance to cover ordinary cases of eccentric loads on the columns by the requirement of Section 5. Where the minimum size of column therein specified is found insufficient, however, the effect of the resulting bending moment shall be properly divided between the adjoining slab and the columns above and below, according to the best principles of engineering and the columns enlarged sufficiently to carry the load safely.

33. BENDING MOMENT CO-EFFICIENTS, PANELS WITHOUT DROPS, OR CAPITALS, OR BOTH—In square panels where no column capital or no depressions are used, the sum total of positive and negative bending moments shall be equal to that computed by the following formula:

B. M. equals  $(WL/8)$  (1.53 less  $4k$  plus  $4.18k^3$ ).

Where B. M. equals numerical sum of positive and negative bending moments, regardless of algebraic signs.

W equals total live and dead load of the whole panel;

L equals length of side of a square panel, c. to c. at columns.

k equals ratio of the radius of the column or column capital to panel length, L.

This total bending moment shall be divided between the positive and the negative moments in the same proportion as in the typical square panels for two-way or four-way systems, as specified above for interior and wall panels, respectively.

34. POINT OF INFLECTION—For the purpose of making the calculations of the bending moment at the sections away from the column capital, the point of inflection shall be considered as being one-quarter the distance c. to c. of columns, both cross wise and diagonally, from the center of the column.

35. TENSILE STRESS IN STEEL AND COMPRESSIVE STRESS IN CONCRETE—Tensile stress in steel and the compressive stress in the concrete to resist the bending moment shall be calculated on the basis of the reinforcement and slab in the width included in a given strip, and according to the assumptions and requirements given in Section 110 of the

Building Ordinance. Steel shall be considered as being concentrated at the center of gravity of all the bands of steel in a given strip.

36. For the four-way system of reinforcement the amount of steel to resist the negative bending moment over the support of each strip A shall be taken as the sum of the areas of steel in one cross band and one diagonal band. The amount of steel to resist the positive bending moment of each strip B shall be considered as the area of the steel in a diagonal band. The amount of steel to resist the positive bending moment in each strip A shall be considered as the area of the steel in a cross band, and the amount of steel to resist the negative moment in each strip B shall be the steel included in the width of strip B.

37. For the two-way system of reinforcement the amount of steel to resist the bending moment in any strip shall be considered as the area of steel included in the width of the strip.

38. In both systems of reinforcement the compressive stress in the concrete in any strip shall be calculated by taking the area of steel considered for each strip and applying in a beam formula based on the principles of Section 110 of the Building Ordinance.

39. Where drop panels are used, the width of beam assumed to resist the compressive stresses over the column capital shall be the width of the drop.

40. The width of beam, where no drop panels are used, shall be the width of steel bands. Where this is found insufficient, the area shall be increased by introducing compression steel in the bottom of slab.

41. **RECTANGULAR PANELS**—When the length of panel in either two-way or four-way system does not exceed the breadth by more than 5 per cent. all computations shall be based on a square panel whose side equals the mean of the length and breadth, and the steel equally distributed among the strips according to the co-efficients above specified.

42. In no rectangular panel shall the length exceed the breadth by more than one-third of the latter.

43. **RECTANGULAR PANELS, FOUR-WAY SYSTEM**—In the four-way system of reinforcement, where length exceeds breadth by more than 5 per cent, the



amount of steel required in strip A, long direction, both positive and negative, shall be the same as that required for the same strip in a square panel whose length is equal to the long side of the rectangular panel.

44. The amount of steel, strip A, short direction, positive, shall be the same as that required for the same strip in a square panel, whose length is equal to the short side of the rectangular panel.

45. The amount of steel in strip B, positive and negative, shall be the same as that required for similar strips in a square panel whose length is equal to the mean of the long and the short side of the rectangular panel.

46. In no case shall the amount of steel in the short side be less than two-thirds of that required for the long side.

47. RECTANGULAR PANELS, TWO-WAY SYSTEM—In the two-way system of reinforcement the amount of steel required for the positive and the negative moment of each strip A shall be determined in the same manner as indicated for the four-way system above.

48. The amount of steel in strip B, positive and negative, running in short direction, shall be equal to that required for the same strip in a square panel whose length equals the long side of the rectangular panel.

49. The amount of steel in strip B, long direction, positive and negative, shall be equal to that required for the same strip in a square panel, whose length equals the short side of the rectangular panel.

50. In no case shall the amount of steel in strip B, long direction, be less than two-thirds of that in the short direction.

51. WALLS AND OPENINGS—Girders and beams shall be constructed under walls, around openings and to carry concentrated loads.

52. SPANDREL BEAMS—The spandrel beams or girders shall, in addition to their own weight and the weight of the spandrel wall be assumed to carry 20 per cent of the wall panel load uniformly distributed upon them.

53. PLACING OF STEEL—In order that the slab bars shall be maintained in a position shown in the design during the work of pouring the slab, spacers and



supports shall be provided satisfactory to the Board of Public Works. All bars shall be secured in place at intersections by wire, or other metal fasteners. In no case shall the spacing of the bars exceed 9 in. The steel to resist the negative moment in each strip B shall extend one-quarter of the panel length beyond the center line of the columns in both directions.

54. Splices in bars may be made wherever convenient, but preferably at points of minimum stress. The length of splice beyond the center point, in each direction, shall not be less than 40 diameter of the bar, nor less than 2 feet. The splicing of adjacent bars shall be avoided as far as possible.

55. Slab bars which are lapped over the column, the sectional area of both being included in the calculations for negative moment shall extend not less than .25 of the panel length for cross bands and .35 of the panel length for diagonal bands, beyond the column center.

56. COMPUTATIONS—Complete computations of interior and wall panels and such other portions of the building as may be required by the Board of Public Works shall be left in the office of the Board of Public Works, when plans are presented for approval.

57. TEST OF WORKMANSHIP—The Board of Public Works may choose any two adjacent panels in the building for the purpose of ascertaining the character of workmanship. The test shall not be made sooner than the time required for the cement to set thoroughly, nor less than six weeks after the concrete had been poured.

58. All deflections under test load shall be taken at the center of the slab, and shall be measured from the normal unloaded position of the slab. The two panels selected shall be uniformly loaded over their entire area, with a load equal to the dead load, plus twice the live load, thus obtaining twice the total designed load. The load shall remain in place not less than 24 hours. If the total deflection in the center of the panels under the test load does not exceed  $1/800$  of the panel length, the slab may be placarded to carry the full design live load. If it exceeds this amount of deflection, and recovers not less than 80 per cent of the total deflection

within seven days after the load is removed, the slab may be placarded to carry the full design live load. If the deflection exceeds the allowable amount above specified, and the recovery is less than 80 per cent in seven days after the removal of the test load, other tests shall be made on the same or other panels. The results of which will determine the amount of live load the slabs will be permitted to carry.

59. GENERAL—The design and the execution of the work shall conform to the general provisions and the spirit of the Building Law of the City and County of San Francisco in points not covered by this ruling and to the best engineering practice in general.

### Concrete Joist Construction.

Section 113B. All concrete floors built of the joist type of construction shall have a minimum top slab of 2½" except in garages, machine shops and all buildings where the live load is over 125 pounds per square foot, and in buildings subjected to unusual concentrated loads, in which case the minimum thickness shall be 3 inches. The minimum thickness for roof slabs built of the joist type of construction shall be 2 inches.

The minimum reinforcement in slabs of the joist type of construction shall be .06 square inches of steel per foot of width transverse to the joists and .015 longitudinal, except in slabs 3 inches or more in thickness the transverse reinforcing shall be .08 square inches per foot of width and .04 square inches per foot of width longitudinally.

The minimum thickness of concrete joists shall not be less than two (2) times the sum of the diameters of the main reinforcing bars plus 1 inch, and in no case shall the thickness of the joist be less than 4 inches.

Wherever the clear spans of concrete joists exceed 20 feet, there shall be a 3-inch concrete bridging rib connecting all joists in the center of the span, and where a 3-inch top slab is required or the floor is subjected to unusual concentrated loads 3-inch concrete bridging shall be provided so that the unsupported length of joists will not be more than 15 feet.

All bars in bottom of joists must have ¾ of an inch of clear concrete fire-proofing.

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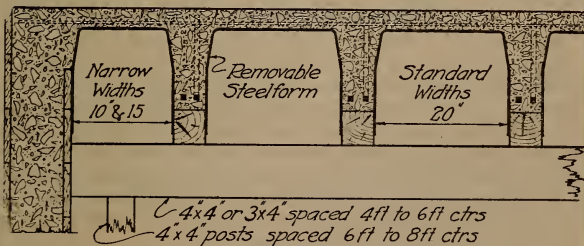
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The combined shear on steel and concrete in concrete joists containing bent up bars and no stirrups shall not exceed 60 pounds per square inch of concrete.

Forms for concrete joist may be removed three (3) days after pouring, provided the joist is supported for not less than two weeks after pouring of concrete.

### **Wind Bracing.**

Section 114. The provisions of Section 89 of this Ordinance relating to Class "A" buildings shall apply to Class "B" buildings, and in addition the reinforcing of columns shall be connected so as to develop its full strength in tension.

### **Walls.**

Section 115. Walls of Class "B" buildings may be built as provided in Sections 90 to 96 inclusive of this Ordinance relating to Class "A" buildings, and provided that self-supporting curtain or exterior walls of brick may not be used for buildings exceeding four (4) stories in height.

### **Reinforced Concrete Walls.**

Section 116. Reinforced concrete walls shall be at least six inches thick. If the area of wall surface included between any two adjacent wall columns and adjacent floor girders exceeds 350 square feet and is less than 500 square feet, the thickness of the wall shall not be less than eight inches, where the area is over 500 but less than 600 square feet the thickness shall be ten inches. If the area exceeds 600 square feet, the wall thickness shall not be less than twelve inches, supported on the frame at each story.

Six-inch reinforced concrete curtain walls shall be reinforced with steel equivalent to  $\frac{3}{8}$ " sq. bars 12" c-c placed horizontally and  $\frac{3}{8}$ " sq. bars at 18" center to center placed vertically. For eight, ten and twelve-inch walls the steel as required above for 6" walls shall be increased 12½ per cent, 25 per cent and 37½ per cent, respectively.

No reinforcement shall be spaced more than 24 inches apart. Additional reinforcement shall be placed around openings, and all reinforcement shall be wired at each intersection. All reinforcements shall be rigidly con-

nected at columns and girders to the steel reinforcement of the same.

Concrete walls may be built in the form of bearing walls of uniform sections, and of same thickness required for brick walls.

If walls are built of piers and connecting walls, the piers shall be calculated and constructed as columns. The connecting wall, if built of reinforced concrete without windows, may be considered as self-supporting, in which case the thickness shall be six inches in the upper 40 feet, followed by an increase of three inches in thickness for every additional 40 feet in height.

When such walls are pierced by openings for doors and windows, the entire loads shall be concentrated on the piers which shall be proportioned as columns.—(As amended by Ordinance 5229, N. S.)

### Partitions and Ceilings.

Section 117. Partitions and ceilings shall be constructed in accordance with the provisions of Sections 106 and 107 of this Ordinance relating to Class "A" buildings.

### Construction.

Section 118. The following conditions shall be observed in reinforced concrete construction:

The concrete shall be mixed as wet as possible and deposited without causing a separation of the cement from the mixture. It shall be placed in the forms as soon as practicable after mixing and in no case shall concrete be used which has been wet more than one hour.

Joints in concrete poured at different times shall be made at such places as will not lessen the strength of the construction. Joints with old concrete shall be made by cleaning and roughening the old concrete and covering same with cement grout.

Forms shall be of sufficient strength to preserve their shape, and tight enough to prevent leaking of concrete. All rubbish and dirt shall be carefully removed from forms.

The forms for the beams and girders of a floor shall be constructed in conjunction with the forms for the

floor slabs which they support, and no forms shall be removed until all parts of the respective floors are strong enough to support themselves and the loads that may come upon them during construction.

### **Tests.**

Section 119. Test to determine the crushing strength of concrete shall be made by a competent engineer under the direction of the Board of Public Works. Tests of any members of reinforced concrete structure shall be made by the owner, when required by the Board of Public Works, and said tests shall show that the members tested will safely carry twice their designated load, and without deflecting more than  $1/700$  of the span.

Section 119A. The term "Public Market Building" shall be taken to mean a building in which foodstuffs and food products are sold.

One-story Public Market Buildings of Class A or B construction may have the roof covered with T and G planking of a minimum thickness of two and three-quarter ( $2\frac{3}{4}$ ) inches.—Added by Ordinance No. 5684, N. S.)

### **Service Pipes and Cutting of Concrete or Reinforcement.**

Section 120. Conduits or pipes for conveying electricity, air or gas may be embedded in the concrete except in columns, provided they are of such size and so placed as not to weaken the structure or its fireproofing in any way.

Pipes conveying liquid in any form are not to be embedded in any part of the structural concrete except as may be necessary to pass through floors and walls.

No drilling into or cutting of the fireproofing or of the steel reinforcing spirals, hoops, stirrups or rods in any columns or beams for the purpose of attaching fixtures, hangers or for any purpose which will in any way injure the concrete or reinforcing in same, is to be permitted.



**Steel Joists Special Class "B" Buildings.**

Section 120A. STEEL JOIST FLOOR AND ROOF CONSTRUCTION IN SPECIAL CLASS "B" BUILDINGS.

FORMED STEEL JOIST FLOOR AND ROOF CONSTRUCTION shall be permitted anywhere in the city for dwellings, office buildings, apartment houses, tenement houses, hotels, hospitals requiring not more than forty (40) pounds live load per square foot of superficial surface, when supported on a steel frame complying with the requirements of Sections 48, 49 and 50 of the "Building Law of the City and County of San Francisco," and fireproofed according to the provisions of Sections 104 and 105 of the building law. Steel frame tie beams used in this construction shall have a depth at least one-twenty-fourth ( $1/24$ th) of their span, and shall be no lighter than 6"-1-12- $\frac{1}{2}$  section. They shall be riveted to the columns with at least four (4)  $\frac{3}{4}$  in. rivets.

Metal joists shall meet the requirements specified for unit stresses in Section 48 of the building law and their maximum spacing shall not exceed twenty-four (24) inches center to center. Tension bridging shall be spaced at not more than six (6) foot intervals measured along the joists.

Ribbed metal lath shall be secured to the tops of the joists. This lath shall be no lighter than twenty-four (24) gauge and shall have the minimum sectional areas specified in Section 113-B of the building law for slab reinforcements. This lath shall constitute the reinforcing for the concrete slab.

The lath shall be covered with a concrete slab at least two (2) inches thick for all roofs, and for the floors of dwellings, apartment houses, tenements and hotels. Floor slabs of office buildings, hospitals and other buildings shall have two and one-half ( $2\frac{1}{2}$ ) inches minimum thickness.

The under surface of the joists shall be fireproofed with a layer of twenty-four (24) gauge metal lath, plastered with a seven-eighths ( $\frac{7}{8}$ ) inch thickness of cement plaster and this fireproofing shall be securely fastened to or suspended from the joists.

Formed steel joist floor construction shall be limited to eight stories above the sidewalk.—(Added by Ordinance No. 5710, N. S.)

## PART IX.

### SPECIAL PROVISIONS RELATING TO CLASS "C" BUILDINGS.

Section 121. Class "C" buildings shall be built with brick, stone or concrete walls supporting the adjacent floor loads and with the interior floor loads supported by studded partitions, or by wooden or steel or cast iron columns and wooden or steel girders. Floor joists may be of wood.

The limit of height shall be eighty-four (84) feet, if metal lath be used on all floor and ceiling joists, girders, studding, wood furring and soffits of stairs. The limit of height shall be fifty-five (55) feet if wooden lath be used, or if not lathed; provided, that if in loft buildings seventy (70) feet or less in height, a complete automatic sprinkler system is installed in accordance with the requirements of the Board of Fire Underwriters of the Pacific, then the requirements as to lathing and plastering will be the same as Class "C" buildings fifty-five (55) feet in height.

Class "C" buildings may be built to the maximum height without lathing if the interior is of mill construction. Class "C" buildings may be built anywhere in the City.

#### Inside Framing.

Section 122. Inside loads shall be supported upon a framing of steel columns and girders and wood joists, or upon cast iron columns, steel girders and wood joists or upon steel or cast iron columns, wooden girders and wooden joists, or upon wooden columns, girders and joists, or studded partitions with wooden joists.

#### Metal Frame.

Section 123. If a metal frame consisting of steel or cast iron columns and steel girders be used it shall be framed as provided in Sections 83 to 88, inclusive, of this Ordinance relating to the construction of Class

"A" buildings. All steel or cast iron columns shall be connected to each other and to the walls at each floor by steel girders or beams not less than six inches deep, or by a timber joist rigidly attached to the column by a metal bracket and bolts.

### Timber Columns.

Section 124. If a timber frame consisting of timber columns, timber girders and joists be used, the columns shall be squared at right angles to their axis.

To prevent the unit stresses from exceeding those provided in Section 44 of this Ordinance, timber or iron cap and base-plates shall be provided in buildings over two stories high.

The foundations of timber columns shall be of concrete or brick, but a distributory grillage of planks or beams may be used in buildings not over two stories in height, as provided in Section 60 of this Ordinance.

### Stud Partitions.

Section 125. Stud shall be calculated as timber columns to sustain the load. Carrying stud partitions in basement shall have a continuous foundation wall of brick, stone or concrete under same.

### Trusses.

Section 126. Roof trusses may be of steel or of steel and timber, or entirely of timber. Trusses of over 45 feet span shall rest upon steel or wood columns, which shall be continuous to the foundations.

In one-story buildings, trusses may, however, rest on bearing plates on brick or concrete walls of sufficient strength to carry the superimposed load, provided the height from the first floor line to the bottom of truss does not exceed 18 feet.

If trusses are framed of steel they shall be constructed in accordance with the provisions of this Ordinance governing the construction of steel trusses in Class "A" buildings.

Trusses of timber and iron or steel shall be built in accordance with the allowed unit stresses for steel

provided in Section 48 of this Ordinance, and of timber in accordance with the provisions of Section 44 of this Ordinance.

Framing of trusses shall be in accordance with standard practice. Timber in tension or compression shall be stressed only in the direction of the fibers.

### Timber Details.

Section 127. All wood beams, joists and other timbers in the party walls of every Class "C" building shall be separated from the beam or timber entering in the opposite side of the wall by at least four (4) inches of solid mason work. All wood trimmer and header-beams or joists shall be proportioned to carry with safety the loads they are intended to sustain.

Every wood header or trimmer more than six (6) feet long, used in any building, shall be hung in stirrup irons of suitable thickness for the size of the timbers. Every wood beam, or joist, except header and tail beams, shall rest at least four (4) inches on the wall, or upon the girder, as authorized by this Ordinance. The ends of all wood floor and roof beams, where they rest on brick walls, shall be cut to a bevel of three (3) inches in their depth.

All wood floor and wood roof beams shall be properly bridged with cross-bridging, and the distance between bridgings, or between bridging and walls shall not exceed eight (8) feet. Solid bridging not less than two (2) inches thick shall be placed between joists over all girders.

All wood joists shall be trimmed away at least one and one-half ( $1\frac{1}{2}$ ) inches from all flues and chimneys, whether the same be smoke, air or any other flues or chimneys. The trimmer beam shall not be less than eight (8) inches from the inside face of a flue and four (4) inches from the outside of a chimney breast, and the header beam not less than two (2) inches from the outside face of the brick or stone work of the same, except that for the smoke-flues of boilers and furnaces where the brick work is required to be eight (8) inches in thickness, the trimmer beam shall not be less than twelve (12) inches from the inside of the flue. The

header-beam carrying the tail beams of a floor, and supporting the trimmer arch in front of a fireplace, shall not be less than twenty (20) inches from the chimney breast.

Cutting for piping or other purposes shall not be done so as to reduce the strength of the supporting parts below that required by the provisions of this Ordinance.

No joists or girders shall be cut into at a distance greater than 12 inches from bearing.

All wood partitions shall have solid caps and sills and at least one row of bridging not less than two (2) inches thick, and of the full depths of the standing stud-ding, and all solidly blocked behind the ribbon on the line of the spring of the cove. Bearing partitions shall have double plates.

Double studs shall be used on the sides and top of all openings with heads and truss braces cut in and secured.

### **Anchors and Ties.**

Section 128. Where a steel beam acting as a girder or a tie beam rests upon a brick wall it shall have an anchor made of two angles riveted to the end of the beam and projecting at least six inches on each side.

Where wooden girders rest upon walls they shall be fastened thereto by two iron anchors of at least  $\frac{1}{2}$  square inch in section, at least three feet long and with iron washers at the outer end at least 6 inches x 6 inches x  $\frac{3}{8}$  inch. The other end shall be turned down at least two inches and fastened to the girder in such a way that the anchor is self-releasing. Box anchors answering the same requirements may be used.

Where wooden joists rest upon walls they shall be fastened with anchors as required for girders, one anchor being used in every eight feet of wall.

Where girders or joists parallel a wall they shall be anchored every eight feet in the same manner.

Girders resting on columns shall be anchored thereto or to the next girder with two iron tie-straps of at least  $\frac{1}{2}$  square inch section.

Joists resting on girders shall be lapped one foot and spiked together or shall be connected with iron straps



of at least  $\frac{1}{2}$  square inch cross section. One such strap shall be used every eight feet along the girder, and those joists having wall anchors shall be strapped, the object being to form a continuous tie across the building.

### Floors.

Section 129. Floors shall be built with timber joists laid as prescribed by Sections 127 and 128 of this Ordinance.

### Roofs.

Section 130. Roofs shall be built as floors or upon trusses.

### Partitions.

Section 131. Partitions shall be built of studding constructed as described in Sections 125 and 127 of this Ordinance. All plastering, where required, shall be done upon metal or wooden lath.

### Ceilings.

Section 132. All ceilings shall be of metal or wooden lath, plastered where required, or of sheet metal.

When ceilings are suspended below bottom of joists and not in contact with same, the bottom of said joists throughout the concealed space thus formed shall be metal lathed and plastered not less than two heavy coats.

### Walls.

Section 133. All exterior walls of Class C buildings, including out shafts and courts, shall be built of brick, stone, interlocking hollow tiles or concrete except as provided in Section 134 of this Ordinance. They may be built as continuous walls without openings, of the thick-

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ness given below. If provided with openings the bearing stress shall not exceed the allowed bearing per unit of area as given in Section 58 of this Ordinance. Exterior walls of interlocking hollow tiles shall not exceed two stories in height above the basement and shall be of the same thickness as required of brick.

Walls may be built supporting a portion of a floor in addition to their own weight, or self-supporting curtain walls only, in which latter case columns shall be built in the wall to carry the floor loads. Where walls support floor loads the center of any column or stud partition supporting floor loads shall be at a distance not greater than twenty-four feet from the wall.

The thickness of bearing walls for any building of brick, stone or plain concrete not over fifty-five feet in height nor over eighty-seven and one-half feet in depth when used only as a dwelling, lodging house, hotel or tenement house above the first floor, shall not be less than as given in the following table, except that party walls shall be four inches thicker:

## Maximum Elevation.

	Basement.....	First story (16 ft.).....	Second story (30 ft.).....	Third story (43 ft.).....	Fourth story (55 ft.).....
	In.	In.	In.	In.	In.
1-story building .....	13	9	.....	.....	.....
2-story building .....	13	13	9	.....	.....
3-story building .....	17	13	13	13	.....
4-story building .....	17	17	13	13	13

If any story exceeds in height the number of feet prescribed in the table, the thickness of the walls throughout such story shall be increased four inches for every five feet or fraction thereof in excess of the tabulated height.

No nine-inch wall shall be used as a party wall.

All bearing walls other than those given above shall have a thickness in accordance with the following table, except that party walls shall be four inches thicker in all cases:

## Maximum Elevation.

	Basement.....	1st story (20 ft.)..	2d story (34 ft.)...	3d story (47 ft.)...	4th story (59 ft.)..	5th story (71 ft.)..	6th story (84 ft.)..
	In.	In.	In.	In.	In.	In.	In.
1st story .....	17	13	.....	.....	.....	.....	.....
2d story .....	17	17	13	.....	.....	.....	.....
3d story .....	21	17	17	13	.....	.....	.....
4th story .....	21	17	17	17	13	.....	.....
5th story .....	25	21	17	17	17	13	.....
6th story .....	25	21	21	17	17	17	13

If any story exceeds in maximum elevation the number of feet described in the table the thickness of each wall throughout such story shall be increased four inches for every five feet or fraction thereof in excess of the tabulated height.

Buildings may be built of more stories than as herein provided, but the thickness for the heights shall not be decreased and all changes in thickness shall be made at a floor level.—(As amended by Ordinance No. 2704, N. S.)

#### **One-Story Dwellings.**

Section 133A. Bearing walls for any one-story building used exclusively for residential purposes, when constructed of brick, stone, hollow tile, hollow cement blocks, hollow interlocking tile or plain concrete, shall be not less than six inches wide, provided that no portion of such six-inch wall shall extend below the ground level.

The basement or foundation walls of such buildings shall be not less than thirteen inches wide with a footing not less than twenty-one inches wide with regular offsets of two inches each until the thirteen-inch wall is reached.

Bond irons three-eighths of an inch thick and three inches wide securely linked or bolted together and extending clear around the building shall be placed beneath the ceiling joists when fire walls are constructed.

A suitable number of one-half inch wrought iron anchors extending into the walls shall be securely fastened to the ceiling joist when fire walls are constructed.

When no fire walls are constructed the rafters and ceiling joists shall be securely spiked to a wooden wall plate not less than two inches thick and four inches wide securely bolted to the bearing walls.

All main cross partitions shall be bolted to the exterior walls with three-eighths inch bolts, two of such bolts shall be spaced equally between the floor and ceiling of each partition.—(Added by Ordinance No. 5713, N. S.)

#### **Two-Story Dwellings.**

Section 133B. Bearing walls for any building used

exclusively for residential purposes, when constructed of brick, stone, hollow tile, hollow cement blocks, hollow interlocking tile or plain concrete, shall be not less than nine inches wide, provided that no portion of such nine inch walls shall extend below the ground level.

No such building shall exceed two stories in height and the combined height of both stories shall not exceed eighteen feet.

The foundation walls of such buildings shall be not less than thirteen inches wide with a footing not less than twenty-one inches wide with regular offsets of two inches each until the thirteen inch wall is reached.

Bond irons three-eighths of an inch thick and three inches wide, securely linked or bolted together and extending clear around the building, shall be placed beneath the second floor joist and beneath the second story ceiling joist when fire walls are constructed.

A suitable number of one-half inch wrought iron anchors, extending into the walls, shall be securely fastened to the second story floor joist and to the second story ceiling joist when the fire walls are constructed.

When no fire walls are constructed the rafters and second story ceiling joist shall be securely spiked to a wooden wall plate not less than two inches thick and six inches wide, securely bolted to the bearing walls.

All main cross partitions shall be bolted to the exterior walls with three-eighth inch bolts, two of such bolts shall be spaced equally between the floor and ceiling in each partition of each story.—(Added by Ordinance No. 5712, N. S.)

### Private Garages.

Section 133C. Bearing walls for any private garage when built in connection with a residence the capacity of which shall not exceed 250 square feet when built of brick, stone, hollow tile, hollow cement blocks, hollow interlocking tile or plain concrete shall be not less than six inches wide, provided that no portion of such six-inch wall shall extend below the ground level.

The foundation walls of such garages shall be not

less than nine inches wide with a footing not less than thirteen inches wide.

Bond irons three-eighths of an inch thick and three inches wide securely linked or bolted together and extending clear around the building shall be placed beneath the ceiling joist when fire walls are constructed.

A suitable number of one-half inch wrought iron anchors extending into the walls shall be securely fastened to the ceiling joist when fire walls are constructed.

When no fire walls are constructed the rafters and ceiling joist shall be securely spiked to a wooden wall plate not less than two inches thick and four inches wide securely bolted to the bearing walls.—(Added by Ordinance No. 5714, N. S.)

### Curtain Walls.

Section 134. Self-supporting curtain walls built between piers or iron or steel columns, and not supported on steel or iron girders, shall be not less than thirteen (13) inches thick for forty-six (46) feet of the upper most height thereof, or to the tier of beams nearest to that height; and they shall be increased four (4) inches for every additional section of forty (40) feet, or to the tier of beams nearest to the height. They shall not be used as bearing walls, but the floor loads shall be carried on steel or cast iron columns built into the walls.

Curtain walls supported at every floor line and at roof by a frame of steel or reinforced concrete girders and columns and constructed as required for Class A or Class B buildings, will be permitted in Class C buildings; provided said frame is tied together in both horizontal directions at every floor and roof line with steel or reinforced concrete ties, struts or girders spaced not to exceed twenty feet apart and of spans not exceeding twenty-five feet between walls, and not exceeding twenty feet between columns and walls or between columns.

Interior columns shall be of steel or reinforced concrete. Steel columns, girders, ties or struts shall be fireproofed as provided for Class A buildings.

Reinforced concrete ties or struts shall be not less than 10 inches wide and the depth shall be not less than that of the floor joists. The area of steel reinforcement in ties or struts shall be not less than one (1) per centum of the area of the concrete, in cross section, and the reinforcement shall be rigidly connected to the wall column or girder reinforcement.

#### **Court Walls.**

Section 135. The walls of all outer and lot line courts and shafts shall have walls constructed in same manner as required for exterior walls.

Walls of interior courts and shafts may be constructed with timber studding covered on the exterior with fireproof material. Courts and shafts adjoining exterior walls are regarded as interior, provided the exterior wall adjoining same shall be unbroken by openings, or if broken by openings, said openings shall be closed by  $\frac{1}{4}$ -inch wire glass set in metal sashes and metal frames.

#### **Fireproofing.**

Section 136. All girders and columns supporting masonry, except columns at street line, shall be fireproofed as required for similar members of Class A buildings.

#### **Bond Iron.**

Section 137. Bond iron at least three inches by one-quarter inch shall be bedded in the center of the wall at each tier of floor and ceiling joints of all Class C buildings and run around the entire walls of the building. Interlocking hollow tiles in Class C buildings may have the bond iron placed flush with the inside edge of the wall.

### **PART X.**

## **PROVISIONS RELATING TO MILL CONSTRUCTION BUILDINGS.**

#### **Mill Construction.**

Section 138. The term "Mill Construction" refers specifically to the construction of the interior frame of Class "C" buildings.

All restrictions of Class "C" buildings not specifically excepted herein shall apply to this class of buildings.



The specific requirement of Mill Construction is that the buildings of this type shall be built without concealed air spaces. No clause shall be construed to render void this requirement.

### **Inside Framing.**

Section 139. Inside loads shall be supported upon a framing of wood posts, girders and beams, none of which shall be less than eight inches in either of its cross dimensions. Wood posts shall not be of smaller sectional area than 100 square inches, nor be less than 10 inches in either dimension, except for posts in the top story, which shall not be of smaller sectional area than 64 square inches, nor be less than eight inches in either dimension. All columns shall be squared at right angles to their axis.

Wood posts shall have cast iron or steel caps or boxes so constructed as to form a base for the next post above. The ends of the girders shall be secured to the cap or box in such a manner as to be self-releasing. Other timber details shall be as required for buildings of Class "C."

Cast iron columns and steel columns, girders and beams may be used if fireproofed and constructed as required for Class "A." All steel beams or girders shall be at least eight inches deep.

### **Floors.**

Section 140. The lower floor may be of concrete if built directly on the ground.

Wood floors shall be of plank not less than three inches in thickness, splined or tongued and grooved, covered with a wearing floor of boards not less than 1 inch thick laid in a crosswise or diagonal direction, tongued and grooved and properly nailed. Between the wearing floor and the planking there shall be placed two thicknesses of carefully laid waterproof material, and this material shall be flashed at least 3 inches around all walls and posts and columns and openings and protected with mouldings or base.

Section 141. Roofs shall be of plank not less than three inches in thickness, splined or tongued and grooved.

### Partitions.

Section 142. All partitions separating manufacturing, ing, store or merchandise occupancies, in the basement and first story, and in the second story, where same is at or near the level of a street from which it has an entrance, shall be of masonry not less than 12 inches thick, but if non-bearing, may be not less than 8 inches thick.

All other partitions shall be either masonry, terra cotta or metal lath on metal studs; except they may be entirely of 2-inch tongued and grooved plank.

### Plastering.

Section 143. Masonry or terra cotta walls may be plastered directly upon their surface, or upon metal lathing on metal furring. No wood furring shall be used and no plaster shall be applied to any wood or wooden lath.

## PART XI.

### PROVISIONS RELATING TO THE CONSTRUCTION OF FRAME OR WOODEN BUILDINGS.

Section 144. A frame or wooden building is a building or structure whose exterior walls, or a portion thereof, are constructed of wood. Wooden frames or frame or wooden buildings covered with metal, plaster, tiles, or terra cotta or veneered with masonry shall be deemed to be frame or wooden structures.

No frame or wooden building now erected within the fire limits shall be enlarged or built upon.

No frame or wooden building now erected within the fire limits shall be repaired without a permit from the Board of Public Works.

Section 145. Frame or wooden buildings shall be limited to a height of forty (40) feet, according to the provisions of Section 78. See Ord. 8926 (N. S.), app. Feb. 3, 1931; Ord. 11.084, app. July 5, 1932, and Ord. 11.089, app. Sept. 26, 1933.

### Walls.

Section 146. The walls of frame or wooden buildings shall be constructed with studding covered on the outside with a weather boarding, or with approved

fiber lumber or with a stucco base of fiber board, asphalt mastic and beveled three-eighth-inch wood strips combined, interlocked with stucco material. No uncovered studding will be allowed against the wall of an adjoining building or structure.—(As amended by Ordinance No. 6673.)

### **Thickness of Foundation Walls.**

Section 147. Brick and concrete foundations for frame or wooden buildings, one and two stories in height, used as dwellings, must not be less than eight (8) inches thick, and not over four (4) feet high. When the foundations are more than four (4) feet high they must not be less than thirteen (13) inches thick.

Foundations for three-story frame or wooden buildings shall not be less than thirteen (13) inches thick, and for buildings over three stories the foundations shall not be less than seventeen (17) inches thick.

When foundation walls of frame or wooden buildings are used for embankment or retaining wall, two and three story buildings with basement shall have foundation or basement walls of brick or concrete not less than thirteen (13) inches thick, and not higher than eight (8) feet from top of top footing to bottom of first floor joists (first tier).

If a deeper basement be desired the walls thereof shall be not less than seventeen (17) inches thick; the bottom of footing of said walls shall not be higher than ten (10) feet from top of top footing to under side of first story floor joists, and the footing shall have a spread of one-half ( $\frac{1}{2}$ ) the thickness of the wall resting on it.

Where it is not allowable to have footings on the outside of a foundation or basement wall, the footings must extend far enough on the inside to make them the required width.

### **Size of Studding for Exterior Walls and Bearing Partitions.**

Section 148. For a building of two stories or less in height except factories, mills or warehouses, the stud-

ding for the outside walls and bearing partitions shall not be less than 2x4 inches; for a building of three stories in height, the studding shall not be less than 3x4 inches, to the bottom of the upper floor joists, and 2x4 inches for the remaining height.

Where the bearing partitions are less than twelve (12) feet apart, the studding may be less than the outside walls, but never less than 2x4 inches. Partitions dividing several stairways and sliding doors may by permission of the Board of Public Works be less than 3x4 inches.

Studding on the exterior and interior walls of buildings shall not be placed more than sixteen (16) inches from centers.

The underpinning of buildings shall be one (1) inch thicker than the studding of the story immediately above, and said studding shall not be placed more than sixteen (16) inches from centers.

### **Dividing Partitions.**

Section 149. All dividing partitions between buildings shall be close boarded from the lower floors to the ground, and from the upper ceiling close to the underside of roof boarding, so as to effectually check all connection from one building to another. Where a large building is divided into tenements the boarding shall be applied on each dividing partition. The distance between dividing partitions shall not exceed twenty-five (25) feet.

### **Framing.**

Section 150. When stories are framed separately, each tier of studding must have top and bottom plates, and the top plates must be doubled; when stories are not framed separately, proper bridging must be placed behind the ribbon at the ceiling line and on top of the joists at the floor line. Bridging must be two (2) inches thick and of the full width of the studding in every case.

All wood beams or joists shall be trimmed away at least one and one-half ( $1\frac{1}{2}$ ) inches from all flues and chimneys, whether the same be a smoke, air or any other kind of a chimney or flue.

The trimmer beam shall not be less than eight (8) inches from the inside face of a flue, and four (4) inches from the outside of a chimney breast, and the header beam must not be less than two (2) inches from the outside of the brick or stone work of the same, except that for the smoke flues of boilers and furnaces where the brick work is required to be eight (8) inches in thickness the trimmer shall not be less than twelve (12) inches from the inside of the flue.

All openings through partitions and walls shall be trussed or provided with carrying girders.

### **Bridging.**

Section 151. All stud walls, or partitions hereafter built, altered or repaired, shall have one row of bridging for every seven feet in height over the first seven. Said bridging shall in all cases extend to the lathing or sheathing so as to prevent the passage of fire and smoke, and shall be the same thickness as the studding. All outside walls and cross-partitions shall be thoroughly angle braced; all joists shall have solid end blocking. All buildings over twenty-five (25) feet in width shall have a row of solid blocking over girder or partition of stairways. A row of cross-bridging at least two (2) inches thick must be placed between the floor joists at least every eight (8) feet.

### **Furring.**

Section 152. When a chimney is furred out, the space between the chimney and the breast shall be so built that the passage of fire and smoke shall be intercepted, and wherever cove ceilings are used they shall be solid blocked between the studding at the spring of the cove.

### **Bay Windows.**

Section 153. In frame or wooden buildings the space between bay, oriel or swell windows shall not be less than five (5) feet in width, measured on outside of building clear of finish; provided that in buildings built on lots having a frontage of twenty-five (25) feet or

less, the space between said bay, oriel or swell windows may be decreased, providing the studding in said space shall be increased in thickness so as to contain the same amount of lumber as would be contained in the studding of the piers in the aforesaid spaces of five (5) feet, but the spaces shall be at least two (2) feet six (6) inches between bays in any case.

Such windows may project not more than thirty-six (36) inches over the street line, measured to the finish; they must not be more than ten (10) feet wide, measured from end to end, and the finish of their soffits must be at least ten (10) feet above the sidewalk, unless the window is entirely back of the street line.

### **Frame Factories Not Over Two (2) Stories High.**

Section 154. The height of frame or wooden buildings of two stories or less used as factories shall be limited to thirty-five (35) feet and the exterior and bearing walls of said buildings shall be built of 2x6 studs sixteen (16) inches from centers.

### **Frame Factories Over Two Stories High.**

Section 155. All frame or wooden buildings more than two (2) stories high hereafter erected or enlarged to be used as factories, shall be constructed as follows: The weights of all the floors shall be concentrated at certain points, and no support shall rest directly upon a stud wall, but all beams, girders, and girders supporting floors shall rest directly upon posts. Said beams and girders, supporting floors, shall not be more than nine (9) feet apart; upon these shall rest the floor, which shall extend from one girder or beam to another, and shall not be less than of three (3) inches thick plank.

Planks shall be laid to the end of the timbers.

The filling between posts and walls shall be built of not less than 2x4 inch studs, 16 inches from centers.

### **Sheds in Fire Limits.**

Section 156. Sheds erected within the fire limits, if not constructed entirely of incombustible material, shall have a timber frame, without boarding, covered on the outside and roof with corrugated iron or sheet metal.



Sheds shall be erected on the ground, shall not exceed fifteen (15) feet in height, shall be open on at least three sides and shall not cover an area exceeding fifteen hundred (1500) square feet.

No fence shall be used as any portion of such shed.

## PART XII.

### GENERAL PROVISIONS RELATING TO CERTAIN BUILDINGS DETERMINED BY THE NATURE OF THE BUSINESS CONDUCTED THEREIN.

Section 157. There are included in this Part certain Provisions which shall act as additions to the provisions of this Ordinance relating to the construction of buildings.

#### Theatres.

Section 158. For the purpose of the Ordinance a theatre is designated as a building which contains seats for the public; and to which an admission fee is charged, and in which movable scenery is used.

All theatres hereafter constructed shall be of Class "A" construction.

The following special provisions shall apply to their construction, in addition to the provisions relating generally to Class "A" buildings.

#### Permit to Use Building.

Section 159. Every theatre hereafter erected, to be used for theatrical or operatic purposes, must be constructed in accordance with the requirements of the Ordinance relating to Class "A" or steel frame construction. No building which at the time of the passage of this Ordinance is not in actual use for theatrical or operatic purposes, and no building hereafter erected not in conformity with the requirements of this Ordinance, shall be used for theatrical or operatic purposes, until the same shall have been made to conform to the requirements of this Ordinance. And no building herein described shall be opened to the public for operatic or theatrical purposes until the Board of Public Works shall have approved the same in writing, as conforming to the requirements of this Ordinance, and

the Tax Collector shall refuse to issue any license for any performance in any such building until a certificate in writing of such approval shall have been given by said Board of Public Works.

### Frontage and Courts.

Section 160. Every such building shall have at least one front on the street, and in such front there shall be suitable means of entrance and exit for the audience. In addition to the aforesaid entrances and exits on the street there shall be reserved for service in case of an emergency and open court or space on the side not bordering on the street, where said building is located on a corner lot, and on both sides of said building where there is but one frontage on the street. In the case of a one-story building having an area not exceeding 4,000 square feet and with a seating capacity of not less than 500 people, a court five (5) feet wide on one side only shall be required, provided that all seats shall be on one floor, and no galleries be allowed in such building.

In all other theatres the width of such open court or courts shall not be less than seven feet where the seating capacity is not over 1,000 people; above 1,000 and not more than 1,800 people, eight feet in width, and above 1,800 people, ten feet in width. Said open court or courts shall begin on a line with or near the proscenium wall and shall extend the length of the auditorium proper, to or near the wall separating the same from the entrance lobby or vestibule.

A separate corridor shall continue to the street from each open court, through such superstructure as may be built on the street side of the auditorium, with continuous walls of brick or fireproof materials on each side of the entire length of said corridor or corridors, and the ceiling and floors shall be fireproof. Said corridor or corridors shall not be reduced in width, by more than three feet, from the width of the open court or courts, and in no case shall the width of said corridor be less than four (4) feet and there shall be no projection in the same; the outer openings to be provided with doors or gates opening toward the street. During the performance the doors or gates in the corridors

shall be kept open by proper fastenings; at other times they may be closed and fastened by movable bolts or locks. The said open courts and corridors shall not be used for storage purposes, or for any purpose whatsoever except for exit and entrance from and to the auditorium and stage, and must be kept free and clear during the performance.

The level of said corridors and courts shall be graded to the sidewalk and flush therewith at all points at street entrances. The entrance of the main front of the building shall not be on a lower level than the sidewalk, and shall not be on a higher level than the sidewalk than six (6) inches, unless approved by the Board of Public Works. To overcome any differences of level in and between courts, corridors, lobbies, passages and aisles on the ground floor, gradients shall be employed of not over one foot rise to ten feet horizontal (1-10), with no perpendicular rises.

### Exits Into Courts.

Section 161. Opening into said open courts, or on the side street, from the auditorium, there shall be not less than two exits on each side in each tier, from and including the parquet and from each and every gallery. Each exit shall be at least five feet in width in the clear, and provided with doors of iron or wood; if of wood, the doors shall be metal covered and shall be constructed as described in this Ordinance.

All of said doors shall open outwardly and shall be fastened with movable bolts, the bolts to be kept drawn during performances, unless a device satisfactory to the Board of Public Works be applied, so as to keep the same locked from without, but to unlock automatically on the application of pressure from within on a bar forming part of the door. There shall be balconies not less than four feet wide in the said open court or courts, at each level or tier above the parquet, on each side of the auditorium, of sufficient length to embrace the two exits, and from said balconies there shall be staircases extending to the ground level, with a rise of not over eight and one-half inches to a step, and not less than nine inches tread, exclusive of the nosing.

The staircases from the upper balconies to the next below shall not be less than three feet in width in the clear, and from the first balcony to the ground three feet in width in the clear, where the seating capacity is for 500 people or less; three feet and six inches in the clear where 500 and not more than 900 people, and four feet in the clear where over 900 people, and four feet six inches in the clear where above 2,500 people. Hand rails shall be secured to the walls, three inches therefrom and about three feet above the centers of the treads, and other hand rails shall be placed on the outside of said staircases, about three feet above the centers of the treads, and secured to said staircase so as to resist a pressure of 100 pounds per linear foot, applied horizontally to said rail.

### **Construction of Balconies and Stairways.**

Section 162. All the before mentioned balconies and stairways shall be constructed of iron throughout, including the floors, and of ample strength to sustain the load to be carried by them, and they shall be covered with a metal hood or awning, to be constructed in such manner as shall be approved by the Board of Public Works. Where one side of the building borders on the street there shall be balconies and stairways of like capacity and kind, as before mentioned, carried to the ground.

### **Other Uses of Building.**

Section 163. When the theatre is located on a corner lot, that portion of the premises bordering on the street and not required for the use of the theatre may, if such portion be not more than sixty feet in depth, be used for offices, stores, hotels or apartments, provided the walls separating this portion from the theatre proper are carried up solidly to and through the roof, and that a fireproof exit is provided for the theatre on each tier, equal to the combined width of exits opening on open courts in each tier, communicating with balconies and staircases leading to the street in manner provided elsewhere in this Ordinance; said exit passages shall be entirely cut off by brick walls from said offices,

stores or apartments, and the floors and ceilings in each tier shall be fireproof.

No portion of any building hereafter erected or altered, used or intended to be used for theatrical or other purposes, as in this section specified, shall be occupied or used as a hotel, boarding or lodging house, factory, work shop or manufactory, or for storage purposes, except that a building to be used as a hotel may be built over or with a theater building provided at least 6000 square feet of the combined area above the auditorium and stage roofs shall remain unoccupied by any construction not directly connected with the theater. No portion of said unoccupied area shall be less than 40 feet wide at any point nor shall the average width be less than 60 ft. wide. Where a hotel building is built over or with a theater building said hotel building shall be entirely separated from said theater building by walls of the same construction as herein required for exterior walls and by concrete floor slabs constructed not less than 6 inches thick properly reinforced.—(Amended by Ordinance No. 6873, N. S.)

### Ordinary Exits.

Section 164. Every theatre accommodating 250 persons shall have at least two (2) exits; when accommodating 500 persons, at least three (3) exits shall be provided; these exits not referring to nor including the exits to the open court at the side of the theatre. Doorways of exit or entrance for the use of the public shall not be less than five feet in width, and for every additional 100 persons or portion thereof to be accommodated in excess of 500 an aggregate of 20 inches additional exit width must be allowed.

All doors of exits or entrances shall open outwardly, and be hung to swing in such manner as not to become an obstruction in a passage or corridor, and no such doors shall be closed or locked during and representation, or when the building is open to the public, unless locked by self unlocking system. Distinct and separate places of exit and entrance shall be provided for each gallery above the first. A common place of exit and



entrance may serve for the main floor of the auditorium and the first gallery, provided its capacity be equal to the aggregate capacity of the outlets from the main floor and the said gallery.

No passage leading to any stairway communicating with any entrance or exit shall be less than four feet in width in any part thereof.

### **Foyers, Lobbies, Etc.**

Section 165. The aggregate capacity of the foyers, lobbies, corridors, passages and rooms for the use of the audience, not including aisle space, between seats, shall on each floor of gallery, be sufficient to contain the entire number to be accommodated on said floor or gallery in the ratio of 150 superficial feet of floor room for every 100 persons.

Gradients or inclined planes shall be employed instead of steps, where possible to overcome slight differences of level in or between the aisles, corridors and passages.

### **Aisles and Seats.**

Section 166. All aisles on the respective floors in the auditorium having seats on both sides of the same shall not be less than three feet wide where they begin and shall be increased in width toward the exits in ratio of one and one-half inches to five running feet. Aisles having seats on one side only shall not be less than two feet wide at their beginning and increased in width one and one-half inches in ten running feet. All seats in the auditorium, excepting those contained in boxes, shall not be less than 32 inches from back to back, measured in a horizontal direction, and firmly secured to the floor. No seat in the auditorium shall have more than six seats intervening between it and an isle. No stool nor seat shall be placed in any aisle.

All platforms in galleries formed to receive seats shall be not more than 21 inches in height of rise nor less than 32 inches in width of platform. The maximum number of movable seats or chairs in boxes shall be eight.

In boxes containing a greater number of seats the seats shall be fastened to the floor.



### **Gallery Fronts, Partitions and Ceilings.**

Section 167. The fronts of each gallery shall be formed of fireproof materials, except the capping, which may be made of wood. The ceiling under each gallery shall be entirely formed of fireproof materials. The ceilings of the auditorium shall be formed of fireproof materials. All lathing whenever used shall be of metal. The partitions of that portion of the building which contains the auditorium, the entrance and vestibule and every room and passage devoted to the use of the audience shall be constructed of fireproof materials, including the furring of outside or other walls.

None of the walls or ceilings shall be covered with wood sheathing, canvas or any other combustible material. But this shall not exclude the use of wood wainscoting to a height not to exceed six feet which shall be filled in solid between the wainscoting and the wall with fireproof materials.

### **Inside Stairways.**

Section 168. All stairs within the buildings shall be constructed of fireproof materials throughout. Stairs from balconies and galleries shall not communicate with the basement or cellar. All stairs shall have treads of uniform width and riser of uniform height throughout in each flight. Stairways serving for the exit of 50 people shall be at least four feet wide between railings, or between walls, and for every additional 50 people to be accommodated six inches must be added to their width. The width of all stairs shall be measured in the clear between hand rails. In no case shall the riser of any stairs exceed seven and one-half inches high, nor shall the treads inclusive of nosings, be less than ten and one-half inches wide in straight stairs.

No circular or winding stairs for the use of the public shall be permitted. Where the seating capacity is for more than 1,000 people there shall be at least two independent staircases, with direct exterior outlets provided for each gallery in the auditorium, where there are not more than two galleries, and the same shall be located on opposite sides of said galleries. Where there are more than two galleries, one or more addi-

tional staircases shall be provided, the outlets from which shall communicate directly with the principal exit or other exterior outlets. All said staircases shall be of width proportionate to the seating capacity as elsewhere herein prescribed.

Where the seating capacity is for 1,000 people or less, two direct lines of staircases only shall be required located on opposite sides of the galleries, and in both cases shall extend from the sidewalk level to the upper gallery, with outlets from each gallery to each of said staircases.

At least two independent stairways, with direct exterior outlets, shall also be provided for the service of the stage and shall be located on opposite sides of the same.

All inside stairways leading to the upper galleries of the auditorium shall be enclosed on both sides with walls of fireproof materials. Stairs leading to the first or lower gallery may be left open on one side, in which case they shall be constructed as herein provided for similar stairs leading from the entrance hall to the main floor of the auditorium. But in no case shall stairs leading to any gallery be left open on both sides.

When straight stairs return directly on themselves a landing of the full width of both flights, without any steps shall be provided. The outline of the landing shall be curved to a radius of not less than two feet to avoid square angles. Stairs turning at an angle shall have a proper landing without winders introduced at said turn. In stairs, when two flights connect with one main flight, no winders shall be introduced, and the width of the main flight shall be at least equal to the aggregate width of the side flights. All stairs shall have proper landings introduced at convenient distances.

All enclosed staircases shall have on both sides strong hand rails firmly secured to the walls, about three inches distant therefrom, and three feet above the stairs, but said hand rails shall not run on level platforms and landings where the same is more in length than width of the stairs.

All staircases eight feet and over in width shall be provided with a center hand rail of metal not less than two inches in diameter, placed at a height of about three feet above the center of the treads, and supported on wrought metal or brass standards of sufficient strength, placed not nearer than four feet, nor more than six feet apart, and securely bolted to the treads or risers of stairs, or both, and at the head of each flight of stairs, on each landing, the posts or standards shall be at least six feet in height, to which the rail shall be secured.

### Interior Walls.

Section 169. Interior walls built of fireproof materials shall separate the auditorium from the entrance vestibule, and from any room or rooms over the same; also from any lobbies, corridors, refreshment or other rooms. All staircases for the use of the audience shall be enclosed with walls of brick or of fireproof materials approved by the Board of Public Works. The openings to said staircases from each tier shall be full width of said staircases.

No door shall open immediately upon a flight of stairs, but a landing at least the width of the door shall be provided between such stairs and such floor.

### Proscenium Wall.

Section 170. A fire wall shall separate the auditorium from the stage, and the same shall extend at least four feet above the stage roof, or the auditorium roof, if the latter be higher, and shall be coped.

Above the proscenium opening there shall be a steel girder resting upon steel columns extending to foundations and of sufficient strength to support safely the load above, and the same shall be covered with fireproof materials to protect it from heat. Should there be constructed an orchestra over the stage, over the proscenium opening, the said orchestra shall be placed on the auditorium side of the fire wall and shall be entered only from the auditorium side of said fire wall. The molded frame around the proscenium opening shall be formed entirely of fireproof materials. If metal be used said metal shall be filled in solid with noncom-

bustible material and securely anchored to the wall with iron.

The proscenium opening shall be provided with a fireproof curtain of asbestos or other fireproof material approved by the Board of Public Works sliding at each end within iron grooves securely fastened to the brick wall and extending into such iron grooves to a depth of not less than six inches on each side of the opening. Said fireproof curtain shall be raised at the commencement of each performance and lowered at the close of said performance, and be operated by approved machinery for that purpose. The proscenium curtains shall be placed at least three feet distant from the foot lights at the nearest point.

No doorway or opening through the proscenium wall, from the auditorium, shall be allowed above the level of the first floor, and such first floor openings shall have fireproof doors on each face of the walls, and the doors shall be hung so as to open from either side at all times.

### **Dressing Rooms.**

Section 171. All shelving and cupboards in each and every dressing room, property room or other storage room, shall be constructed of metal, slate or some fireproof material. Dressing rooms may be placed in the fly galleries, provided that proper exits are secured therefrom to the fire escapes in the open court, and that the partitions and other matters pertaining to dressing rooms shall conform to the requirements herein contained, but the stairs leading to the same shall be fireproof. The dressing rooms shall have an independent exit leading directly into a court or street, and shall be ventilated by windows in the external wall, and no dressing room shall be more than ten feet below street level.

### **Windows.**

Section 172. All windows shall be arranged to open, and none of the windows in outside walls shall have fixed sashes, iron grills or bars.

### **Stage Floors.**

Section 173. All that portion of the stage not comprised in the working of scenery, traps and other me-

chanical apparatus, for the presentation of a scene, usually equal to the width of the proscenium opening, shall be of Class "A" construction.

### **Fly Galleries.**

Section 174. The fly galleries entire, including pin rails, shall be constructed of iron or steel, and the floors of said galleries shall be composed of iron or steel beams filled with fireproof materials, and no wood boards nor sleepers shall be used as coverings over beams, but the said floor shall be entirely fireproof. The rigging loft shall be fireproof. All stage scenery, curtains and decorations made of combustible material shall be painted or saturated with some approved non-combustible material, or otherwise rendered safe against fire, and the finishing coat of paint applied to all woodwork shall be of such kind as to resist fire, to the satisfaction of the Board of Public Works.

Fireproofed wood may be used, if satisfactory to the Board of Public Works.

Fly galleries shall rest upon columns extending to the basement.

### **Fire Protection.**

Section 175. Stand pipes, four inches in diameter shall be provided with hose attachments on every floor and the gallery as follows, namely: One on each side of the auditorium in each tier, also one on each side of the stage on front of proscenium wall in each tier and at least one in the property room and one in the carpenter shop, if the same be contiguous to the building. All such stand pipes shall be kept clear from obstruction. Said stand pipes shall be separate and distinct, receiving their supply of water direct from the power of pump or pumps installed and maintained by the owner or lessee of the building. They shall be fitted with the regulation couplings of the fire department, and shall be kept constantly filled with water by means of an automatic fire pump or pumps, of sufficient capacity to supply all the lines of hose when operated simultaneously, and said pump or pumps shall be supplied from the street main and be ready for immediate use at all times during a performance in said building.



In addition to the requirements contained in this section there shall be provided a four-inch standpipe, running from cellar to roof, with one two-way three-inch siamese connection to be placed on street above the curb level, and with one two and one-half inch outlet with hose attached thereto on each floor, placed as near the stairs as practicable.

All buildings shall be provided with an auxiliary fire apparatus and appliances, consisting of water tank on roof or in cellar, stand pipes, hose, nozzles, whences, fire extinguishers, hooks, axes, and other appliances, as may be required by the Fire Department, all to be of the best material and of the sizes, pattern and regulation kinds used and required by the Fire Department.

A separate and distinct system of automatic sprinklers, with fusible plugs, approved by the Board of Public Works, supplied with water from a tank located on the roof over the stage, and not connected in any manner with stand pipes, shall be placed on each side of the proscenium opening and on the ceiling or roof over the stage at such intervals as will protect every square foot of stage surface when said sprinklers are in operation. Automatic sprinklers shall be also placed wherever practicable, in the dressing rooms, under the stage, and in the carpenter shop, paint rooms, store rooms and property rooms. The entire installation of automatic sprinklers shall be in accordance with the rules of the Board of Fire Underwriters.

A proper and sufficient quantity of one and one-half inch cotton, rubber lined hose, not less than 100 feet, fitted with the regulation couplings of the Fire Department, and with regulation Fire Department shut-off nozzles attached thereto, and with hose spanners at each outlet, shall always be kept attached to each hose attachment, as the Chief Engineer of the Fire Department may direct. (As amended by Ord. 7286. App. Oct. 25, 1926.)

There shall also be kept in readiness for immediate use on the stage at least two casks of water, and two buckets to each cask. The cask and buckets shall be painted red. (As amended by Ord. 7286. App. Oct. 25, 1926.)



There shall also be provided hand pumps or other portable fire extinguishing apparatus, and at least four axes, and also two 25-foot hooks, two 15-foot hooks and two 10-foot hooks on each tier or floor of the stage. (As amended by Ord. 7286. App. Oct. 25, 1926.)

### **Lights.**

Section 176. Every portion of the building devoted to the uses or the accommodations of the public, also all outlets leading to the streets and including the open courts and corridors, shall be well and properly lighted with electricity during every performance, and the same shall remain lighted until the entire audience has left the premises. All of said lights in the halls, corridors, lobbies and any other part of said building used by the audience, except the auditorium, must be controlled by a separate shut-off located in the lobby and controlled only in that particular place. Gas mains supplying the building shall have independent connections for the work shops, fly galleries and stage, and provision shall be made for shutting off the gas from the outside of the building.

All lights in passages and corridors in said building whenever deemed necessary by the Board of Public Works shall be protected with proper wire network. All border lights shall be constructed according to the best known methods and subject to the approval of the Board of Public Works, and shall be suspended for ten feet by wire rope.

All ducts or shafts used for conducting heated air from the main chandeliers or from any other light or lights shall be constructed of metal and made double, with an air space between.

### **Lights at Exits.**

Section 177. At each and every exit in any theatre or opera house there shall be placed and maintained a lamp in which only mineral, sperm, nut or other non-explosive oil, or electricity upon an independent circuit, satisfactory to the Board of Public Works and the Board of Fire Wardens, shall be used; and said lamp or lamps shall be lighted prior to the opening of the

doors of said theatre, and shall be kept lighted until the audience shall have departed from the premises; and there shall be inscribed upon said lamp or lamps the word "EXIT" in distinctly visible letters not less than eight (8) inches high.

### Ventilation of the Stage.

Section 178. There shall be provided in the roof of that portion of the building over the stage, smoke vent openings, the total net area of which shall be one-tenth of the area of the stage included between the three outer walls of the building and proscenium wall.

No single opening shall be of an area less than one-fifth of the total required area. These smoke vent openings shall be closed by shutters so constructed that they will open by their own weight. They shall be held in place by cords or ropes extending to and controlled from the open stage. As a part of each rope operating each shutter there shall be included two fusible links designed in accordance with the requirements of the Board of Fire Underwriters to open at 160 degrees Fahrenheit.

All parts of shutters and frame shall be of incombustible materials. Glass, if used, shall be plain glass. Shutters may be of two types. If shutters occupying a vertical position when closed are used, they shall be hinged at the bottom and provided with a metal weight which shall cause them to open outward. This weight shall be so placed that the shutter is held in a closed position by the rope and on release of the rope the shutter will open its full width. If shutters built on the incline of the roof are used they shall be arranged to rest and travel on rollers. They shall be so built that they will open by their own weight and shall be held in a closed position by the rope.

These shutters shall be opened at least once a week or more often if required by the Fire Department.

No fastening or other device for holding the shutters of the smoke vent openings in a closed position, other than the ropes with fusible links shall be attached to any such shutter. The owner or lessee of any theatre or any employee of such owner or lessee violating this

provision shall be guilty of a misdemeanor under the terms of this Ordinance.

No obstruction of any kind shall be placed in the way of a complete draft from the stage to the smoke vent openings except that required for the operation of the scenery. No flooring shall be placed on the girdiron but its entire surface shall be open.

### **Steam Boilers and Heating Appliances.**

Section 179. Every steam boiler which may be required for heating or other purposes shall be located outside the building, and the space allotted to the same shall be enclosed by walls of masonry on all sides, and the floor and ceiling of such space shall be constructed of fireproof material. All doorways in said walls shall have fireproof doors. No floor register for heating shall be permitted.

No coil or radiator shall be placed in any aisle or passageway used as an exit, but all said coils and radiators shall be placed in recesses formed in the wall or partitions to receive the same. All supply, return or exhaust pipes shall be properly incased and protected where passing through floors or near woodwork. Gas furnaces shall not be used for heating purposes.

### **Work Shop, Storage Room, Property Rooms.**

Section 180. No work shop, storage or general property rooms shall be allowed on the auditorium side of the proscenium wall, nor above or under the stage, nor in any of the fly galleries. All of said rooms or shops may be located in the rear or at the side of the stage, but in such cases they shall be separated from the stage by a brick wall and the openings leading into such portions shall have fireproof doors on each side of the openings, hung to iron eyes built in the wall.

### **Restrictions as to Use of Building.**

Section 181. No portion of any building hereafter erected or altered, used or intended to be used for theatrical or other purposes, as in this section specified, shall be occupied or used as a hotel, boarding or lodging house, factory, work shop or manufactory, or for storage purposes, except as may hereafter be specially

provided for. Said restriction relates not only to that portion of the building which contains the auditorium and the stage, but applies also to the entire structure in conjunction therewith. Stores or shops for the sale of goods shall be permitted on the ground floor. No store or room contained in the building nor the offices, stores or apartments adjoining as aforesaid shall be let or used for carrying on any business dealing in articles designated as especially hazardous in the classification of the Board of Fire Underwriters of the Pacific, nor for manufacturing purposes. No lodging accommodations shall be allowed in any part of the building communicating with auditorium.

### **Existing Buildings.**

Section 182. All existing theatres shall be made to comply with the provisions of this Ordinance, under the direction and supervision of the Board of Public Works and Fire Wardens to such extent as may be deemed necessary and practical by said Boards.

### **Diagram of Theatre on Program.**

Section 183. A diagram or plan of each theatre, gallery or floor showing distinctly the exits therefrom, each occupying a space not less than fifteen square inches, shall be printed in black lines in a legible manner on the program of the performance.

### **Right of Entry by Authorities.**

Section 184. The Mayor, the members of the Board of Supervisors, the Commissioners of the Board of Public Works, the Architect and the Inspectors of Buildings of the Department of Public Works, the Commissioners and Chief Engineer of the Fire Department and the Chief of the Police Department shall have the right to enter at any time any building used for theatrical or operatic purposes or for public entertainments of any kind.

### **Fire Department to Control Fire Apparatus.**

Section 185. The stand pipes, gas pipes, electric wires, hose, footlights and all apparatus for the extinguishment of fire, or guarding against the same, as in this Ordinance specified, shall be in charge and under

the control of the Fire Department after the certificate has been issued by the Board of Public Works as required by this Ordinance.

**Section 186. Repealed by Ordinance No. 5200, N. S.**  
**Special Provisions Relating to Places of Amusement**  
**wherein Moving Picture Exhibitions Are Given.**

Section 187. All places of amusement hereafter to be constructed, erected or altered wherein moving pictures are exhibited for public entertainment, and where an admission fee is charged, having a seating capacity of 400 or more persons, shall be built and constructed to conform to all laws, conditions and requirements now existing or hereafter to come in force and effect relating to theatres and places where theatrical or operatic performances are given.

Section 188. All such places of amusement hereafter to be constructed, erected or altered, wherein moving pictures are exhibited for public entertainment, and where an admission fee is charged, having a seating capacity of less than 400 persons, shall be built and constructed in accordance with the following laws, conditions and requirements, to wit:

A. All such places of amusement in the fire limits must be and shall only be contained in Class "A," Class "B," or Class "C" buildings.

All such places of amusement not contained in Class "A" or Class "B" buildings must have their interior entirely and throughout lined with sheet metal, or metal lathed and plastered. Brick, tile or concrete walls need not be lathed or plastered.

B. All aisles in the auditorium having seats on both sides of the same shall not be less than  $3\frac{1}{2}$  feet in width when the aisles are 60 feet or less in length and not less than 4 feet in width when the aisles are more than 60 feet in length. Aisles having seats on one side only shall not be less than  $2\frac{1}{2}$  feet in width when the aisles are 60 feet or less in length, and not less than 3 feet in width when the aisles are more than 60 feet in length.

C. All seats in the auditorium shall not be less than 29 inches from back to back, measured in a hori-



zontal direction, and firmly secured to the floor. No seat in the auditorium shall have more than six seats intervening between it and an aisle. No seat nor stool shall be placed in any aisle.

D. All such places of amusement having a seating capacity of 300 or more persons shall be equipped with at least one 1½-inch galvanized stand pipe in the middle of one side wall of the auditorium. Said stand pipe shall have a 1½-inch direct connection with the street main. Attached to said stand pipe there shall be fifty feet of 1½-inch hose, and at the end of such hose there shall be a five-eighths inch play pipe.

E. In all such places of amusement of whatever seating capacity, two buckets, each containing at all times not less than three gallons of water, must be kept with two fire extinguishers immediately outside the operator's booth, or moving picture box, and said buckets and fire extinguishers shall be ready for service at all times.

F. There must be in the operator's booth a metal ventilating pipe, not smaller than six inches in diameter, which must extend through an exterior wall or roof of the building, or may be connected to a brick or patent chimney. A window opening directly to the outer air may be used in lieu of the above ventilating pipe.

G. Openings for picture and operator's view shall not be larger than 12 by 12 inches, and must have gravity doors made of No. 14 B. & S. gauge sheet iron arranged to drop freely in heavy metal grooves on inside of booth. Doors to be held in position (open) by fusible links placed in series with a single strand of cord, so arranged that cord will be suspended directly above film when in place in machine, so that in case of ignition of film the link will fuse or cord will burn and allow gravity doors to drop and close openings. There shall be no opening from the operating booth into any closet, storeroom or blind space, and but one exit door.

H. All electric wiring must conform to the rules of the national code. The operator's cabinet or picture box must be absolutely fireproof, and the picture machine must be operated entirely by hand.



The use of a motor to turn the picture machine is hereby strictly prohibited.

(See Ordinance No. 1510—New Series.)

I. No wooden fixtures, benches or appliances, unless same be metal clad and no other inflammable materials not required for the operation of moving picture machines shall be allowed in the operating room.

J. All such places of amusement shall have at least one frontage on a street, and in such frontage there shall be at least two exits, each of which is to be at least five feet wide.

In addition to such exits on the street there shall be reserved for service in case of emergency, where the seating capacity is 150 or less, one exit in the rear; where the seating capacity is greater than 150 and less than 300, there shall be one exit in the rear and an additional exit in the rear half of the auditorium; where the seating capacity is greater than 300 and less than 400, there shall be one exit in the rear and two additional exits, one of which must be in the rear half of the auditorium and which, in the case of auditoriums less than 30 feet in width, must be at the side near the center. Such rear exits, if in the side walls, must be within ten feet of the rear wall. Each exit shall not be less than five feet in width.

All exits must open into public streets, public or private alleys or into passageways at least five feet wide communicating directly with the street. Said passageways must have their interiors lined throughout with sheet metal or be metal lathed and plastered. Exits which lead into five-foot interior passageways must have no doors, but may be hung with curtains or portieres. All doors and exits must open outward and be unfastened at all times during which people are assembled. Every exit shall have over the same, in the inside, the word "EXIT" painted in legible letters not less than eight inches high; over each such exit there shall also be a red light on an independent circuit from all other lights in the building. All courts and passageways shall be lighted during the performance.

K. There shall be aisles of the width hereinbefore specified, extending the entire length of the auditorium

to each and every exit opening into said streets or alleys, or passageways; there shall be space of at least ten feet between front tier of seats and screen or stage; cross aisles leading to side exits shall extend from center aisle to said exits. Where exits are at rear, aisles leading to same shall be of the maximum widths herein prescribed, throughout their entire length.

### Places of Public Assemblage—Halls.

Section 189. Unless specific reference is made in this Ordinance to special buildings for public assemblage, the following provisions shall apply:

Under this heading shall be included public halls and club halls which may be used for public entertainment and although occasionally used for theatrical representation shall not be construed to be theatres as the term is used in this Ordinance, notwithstanding the fact that movable scenery be used upon the stage thereof; **Provided, however,** that such halls shall not be used for theatrical representations on more than three consecutive days nor more than thirty times in a year.

Halls and places of assemblage other than theatres shall have but one gallery above the main floor, and its seating capacity shall not exceed one-fourth the total seating capacity of the hall.

All buildings containing places of assemblage seating more than five hundred (500) people above the first floor shall be of Class "A" or Class "B" construction.

No place of public assemblage seating over 300 people shall be above the second floor.

Inside the fire limits all buildings used as places of public assemblage (except churches), seating over eighteen hundred (1800) people, shall be of Class "A" construction.

If seating from one thousand (1000) to eighteen hundred (1800) people, shall be of Class "A" or Class "B" construction.

If seating less than one thousand (1000) people, shall be of Class "A," Class "B" or Class "C" construction.

Outside the fire limits halls may be of frame construction, but if seating over eight hundred (800) persons the roof shall be of metal supported on steel

trusses and steel purlins and steel columns carried to the foundation.

Churches may be of frame construction outside of the fire limits, but all towers and spires must be covered with incombustible materials.

### Exits.

All exits shall have doors hinged to swing out and shall be not less than five (5) feet wide.

Halls having a seating capacity of eighteen hundred (1800) people or over shall have one exit for every four hundred and fifty (450) people.

If situated on a street corner, shall have at least two (2) exits to each street. If on inside lot shall have at least two (2) exits to front street and two (2) exits to rear street, or to a court built full length of hall, at least seven (7 feet 0 inches) wide open to front and rear streets, or to two such courts both open to front street.

If staircases are necessary they shall not be less than six (6) feet wide.

Halls having a seating capacity of one thousand (1000) to eighteen hundred (1800) people shall have at least four (4) exits situated as above. Staircases if necessary shall not be less than five feet six inches (5 feet 6 inches) wide.

Halls having a capacity of four hundred (400) to one thousand (1000) if on a street corner shall have two (2) exits to front street and one (1) exit to side street. If on inside lot shall have two (2) exits to front street and one (1) exit on or near the rear leading to rear street or to a court leading to front street. Courts and stairs shall not be less than five (5 feet 0 inches) wide.

In Class A or B buildings the side courts will not be required, but the same number of exits as widely separated as possible will be required.

Halls having a capacity of less than four hundred (400) people shall have two (2) front exits, or if on a street corner shall have one (1) front exit and one (1) side exit, or may have one (1) front exit and one (1) rear exit to street or alley. Stairs shall be not less than five (5) feet wide.

If halls are situated above the first floor exits may open into vestibules with stairs leading to streets.

There shall be at least one (1) foot width of stairway for every one hundred people or fraction thereof.

Where one side of hall borders on street, alley or court, iron balconies with stairs leading to ground may be used in lieu of stairs and may be hinged and suspended by weights when not in use, if on public street or alley.

Where halls occur in different stories of a building the stairs leading from same shall be increased one foot in width of each stair for each additional story where hall or halls occur; excepting in Class "A" and "B" buildings where this provision shall not apply.

Galleries seating more than one hundred (100) people shall have two stairways, one on each side. There shall be at least one foot width of stairway for every one hundred (100) people or fraction thereof. No stairway shall be less than three feet six inches (3 feet 6 inches) wide.

Winders shall not be permitted in any staircase leading from a hall or from a gallery therein.

The provisions relating to aisles and seats in theatres shall apply to halls. When movable seats are used they shall be subject to the same regulations regarding aisles and exits as are fixed seats.

Where the building is of Class "C" construction there shall be a brick or concrete wall extending from basement to roof dividing the hall for public assemblage from other parts of the building. Such wall may have not more than two openings in each story connecting the hall with other parts of the building. Such openings shall be not over eight feet in width, and shall be not less than forty feet apart, and shall be closed by iron doors.—(As amended by Ordinance No. 5466, N. S.)

### Cubic Air Space.

Section 189A. In all buildings which are designated to be used as a whole or in part as public buildings, public or private institutions, school houses, churches, public places of assemblage, or places of public resort, and all buildings which are designed to be used in

whole or in part as a factory, workshop, mercantile or other establishment, and with accommodations for ten or more employees, provision shall be made for at least fifteen square feet of floor space and 200 cubic feet of air space for each occupant to be accommodated in each room therein, and for supplying at least thirty cubic feet of pure air per minute for each occupant thereof.

In every building, or part of building, intended for audience room only, as a theatre, hall or nickelodeon, provision shall be made for supplying at least thirty cubic feet of pure air per minute for each occupant thereof. In open buildings for general purposes of exposition or public assemblage, in which the roof span exceeds one hundred and fifty (150) feet, and the steel construction is exposed with no air space, the roof surface may be of planking, not less than two and three-quarters ( $2\frac{3}{4}$ ) inches thick and laid tight, provided that it is fireproofed on the exterior by a covering of metal, tile, slate or other equally fireproof material, and provided that all portions of the building except the free spans exceeding one hundred and fifty (150) feet be of fireproof construction. In no case shall the planking roof surface come nearer than thirty feet to the first floor level.

### **Tenement Houses and Apartment Houses.**

Section 190. Tenement houses and apartment houses shall be constructed in accordance with the provisions of that certain act of the legislature of the State of California entitled: "An Act to Regulate the Building and Occupancy of Tenement Houses in Incorporated Towns, Incorporated Cities and Cities and Counties, and to Provide Penalties for the Violation Thereof." Approved April 16, 1909, and with the provisions of any and all amendments thereto."

### **Hotels and Lodging Houses.**

Section 191. In all buildings other than Class "A" or Class "B" used as hotels or lodging houses all partitions must be lathed and plastered and must run to the ceiling.

All buildings used as hotels and lodging houses with



sleeping accommodations for more than one hundred people shall be Class "A," Class "B" or Class "C."

No frame or wooden buildings used as hotels or lodging houses shall be over three stories in height.

### **Exhibition Buildings.**

Section 192. Buildings for fair and exhibition purposes, towers for observation purposes and structures for similar uses, outside of the fire limits, whether temporary or permanent in character, shall be constructed in such manner and under such conditions as the Board of Supervisors may prescribe, provided, that in open buildings for general purposes of exposition or public assemblage in which the roof span exceeds one hundred and fifty (150) feet, and the steel construction is exposed with no air space, the roof surface may be of planking, not less than two and three-quarters ( $2\frac{3}{4}$ ) inches thick laid tight, provided that it is fireproofed on the exterior by a covering of metal, tile, slate or other equally fireproof material, and provided that all portions of the building except the free spans exceeding one hundred and fifty (150) feet be of fireproof construction. In no case shall the planking roof surface come nearer than 30 feet to the first floor level.—(As amended by Ordinance No. 5368, N. S.)

### **Smokehouses.**

Section 193. All smokehouses shall be of fireproof construction, with brick walls, iron doors and brick or metal roofs. An iron guard shall be placed over and three feet above the fire, and the hanging rails shall be of iron. The walls of all smokehouses shall be built up at least three (3) feet higher than the roof of the building in which they are located.

### **Power Woodworking Mills, Etc.**

Section 194. No person, firm or corporation shall construct or cause to be constructed, maintain or cause to be maintained, occupy or cause to be occupied, any structure or building hereafter used, or intended to be used as a planing mill, saw mill, sash or door factory, furniture or cabinet factory, or for any other woodworking purposes, if planers, stickers or jointers are



used, and run by power, without first obtaining a permit so to do from the Board of Supervisors.

Whenever application is made to the Board of Supervisors for any such permit, the Clerk of said Board shall furnish to the applicant a notice to be posted conspicuously in front of the premises sought to be so occupied setting forth that such permit has been applied for, the nature of the same, and the time and place where the application for the granting of the same will be heard. Such notice must be posted immediately after the filing of the application and be kept posted until said application is finally granted or denied.

An opportunity to be heard shall be given to all interested persons, and on the granting or refusing of said permit, the Board shall exercise a sound and reasonable discretion.

No building shall be constructed to be used as a planing mill, saw mill, sash and door factory, furniture or cabinet factory or other woodworking purposes, if planers, stickers or jointers are used and run by power unless the same be of heavy timber, "mill construction" frame and floors.

The exterior walls and roof shall be corrugated iron fastened to the timber frame and without boarding, if outside the fire limits, unless of Class "A," "B" or "C" construction. Said building shall not exceed two (2) stories, or thirty feet in height, shall have floors not less than two (2) inches thick extending to the outer covering of the building; shall have all elevators, hoists, stairs, chutes and other vertical floor openings tightly closed with wood partitions and doors or trapped; and the outer wall, floor and roof systems shall be constructed without concealed spaces.

No building already erected and not now so used shall hereafter be used as a planing mill, saw mill, sash and door factory, furniture or cabinet factory, or for any other woodworking purposes, if planers, stickers or jointers are used, and run by power, unless it is made to conform to the above specification.

In buildings of Class "C" used as planing mills, wagon or carriage factories, furniture factories or any other woodworking factories, all joists and studding

bearing weight, shall be covered with metal lath and plaster and the floor shall be double, with the top floor laid over three-quarters ( $\frac{3}{4}$ ) of an inch of mortar, or two thicknesses of asbestos paper, unless such building is constructed on the slow burning or mill construction plan, in which case the floor shall extend from one beam to another and shall not be less than three (3) inches thick.

All planks shall be laid to the end of the timbers.—  
(As amended by Ordinance No. 2741, N. S.)

### Grain Elevators and Cold Storage Plants.

Section 195. Nothing in this Ordinance shall be construed as to apply to or prevent the erection of what are known as grain elevators, as usually constructed, provided they are erected on tide water, in isolated localities and outside of the fire limits, under such conditions as the Board of Public Works may prescribe.

Nothing in this Ordinance shall be construed so as to apply to or prevent the erection of cold storage plants to a height of not exceeding 55 feet, when such structures are erected in the following described district.

Commencing at the intersection of the center line of Water Front street with the center line of Army street; running thence westerly along the center line of Army street to the center line of Third street; thence southerly along the center line of Third street to the center line of Second avenue South and the center line of Third street; thence along the center line of Third street in a southerly direction to the center line of Fourth avenue South; thence southeasterly along the center line of Fourth avenue South to the center line of I street South; thence southwesterly along the center line of I street South to the center line of Ninth avenue South; thence southeasterly along the center line of Ninth avenue South to the center line of D street South; thence northeasterly along the center line of D street South to the center line of Seventh avenue South; thence southeasterly along the center line of Seventh avenue South to the center line of B street South; thence northeasterly along the center lines of B

street South and China street to Water Front street; thence along the center line of Water Front street the point of commencement.

And provided further that such cold storage plants have a fireproof roof, and that their exterior walls be covered with metal, asbestos, concrete or other fireproof material, and that the hallways, passages and elevator shafts be protected by a first class automatic sprinkling system.

Section 195-A. Buildings of mill construction as defined in Ordinance No. 1008 (New Series) known as the "Building Law" and not more than four stories nor exceeding 55 feet in height and conducted as industrial plants, may be altered when such alterations are deemed a necessity to the proper conduct of said industries within the boundaries of the following described district:

Beginning at a point at the intersection of the westerly line of the Embarcadero and the northerly line of Bay street; thence westerly along the northerly line of Bay street to the easterly line of Taylor street; thence northerly along the easterly line of Taylor street to the Embarcadero; thence along the Embarcadero to the northerly line of Bay street and point of commencement. Provided, that any alteration to such building, as herein specified, shall be made under the control, supervision and to the satisfaction of the Board of Public Works.—(Added by Ordinance No. 6874, N. S.)

### Open Sheds for Storage.

Section 196. Nothing in this Ordinance shall be construed so as to apply to or prevent the erection of sheds for the storage of non-perishable products within the following limits, to wit: Bounded by First street on the west; by Brannan street on the south; by Fremont street on the east and Bryant street on the north; and provided that such sheds shall have timber frame, without boarding, open on three sides, and remaining side and roof covered with corrugated iron or sheet metal.—(As added by Ordinance No. 4934, N. S.)

### Stable Permits.

Section 197. It shall be unlawful for any person, firm or corporation hereafter to construct any building or premises to be used as a stable for horses, mules, cows or other animals without first obtaining a permit from the Board of Supervisors and the Board of Health, specifying the name of permittee, and the location of building or premises to be used as a stable and the number of animals intended to be kept therein.

It shall be unlawful for any person, firm or corporation to maintain as a stable for horses or mules any existing structure not used at the date of the passage of this Ordinance for stable purposes without first obtaining a permit from the Board of Supervisors and Board of Health, specifying the name of the permittee, the location of the building or premises to be used as such stables and the number of animals to be kept therein.—**Section 197 declared unconstitutional, In re Luigi Dondero, 19 Cal. App. Rep. 66. See also Ordinance No. 2639 (New Series).**

### Stable Buildings.

Section 198. All buildings used for stabling animals in the basement shall be Class "C" mill construction.

All buildings used for stabling animals above the first or ground floor shall be Class "A" or "B" construction if more than 125 head are kept therein; if 125 head or less are kept therein, they shall be Class "C" mill construction. All buildings used for stabling animals on the first or ground floor may be of frame construction, provided they are outside the fire limits and not more than 125 head are kept therein.

Stables capable of accommodating 10 to 50 animals shall be provided with fully equipped fire hose reels or racks connected to an adequate source of water supply through not less than 3-inch stand pipes; said reels or racks shall be of such number and so placed that 50 feet of cotton hose and  $\frac{3}{4}$ -inch nozzle with a water pressure of 20 pounds per square inch, all parts of the building may be reached.

Stables capable of accommodating 50 animals or more shall be equipped with one 5,000 gallon water tank on

roof, as described in Section 266 of this Ordinance and connected with a  $\frac{3}{4}$ -inch supply pipe. Wet stand pipes of 3-inch caliber shall be run therefrom, fully equipped with proper valves, connected thereto  $1\frac{1}{2}$ -inch cotton hose on reels or racks, and shall be of such number and so placed that with 50 feet of hose any part of the building may be reached.

In all stable buildings of Class "A," "B" or "C" mill construction there shall be one emergency runway not less than four feet in width in the clear, besides the regular runway.—(Amended by Ordinance No. 1462, N. S.)

The floor of all buildings or premises hereafter constructed and intended to be used for the purpose of stabling horses, mules, cows or other animals must be of concrete not less than three inches thick with a layer of cement or asphaltum not less than one-half inch thick.

A semi-circular or V-shaped gutter drain shall be constructed at the time the floor is put down in the rear of those portions or parts of the premises where stalls are to be constructed.

This gutter drain shall have a uniform thickness the same as that of the floor of the stable and shall not be less than four inches inside measurement at the floor level, nor less than three inches in depth, with sufficient fall to carry off all liquid discharges from the stalls.

In all buildings hereafter constructed for stabling animals on the first floor when of Class C or frame construction, the side walls or foundation of the structure shall be of concrete or brick laid in cement mortar not less than eight (8) inches thick at the top and shall continue to a height of not less than one foot above the surrounding surface soil, and shall have no breaks or openings except when necessary for doors.

Wash racks, when located within the stable, must be provided with surface drain to connect with sewer, provisions for same to be made before putting down the floor.

Gutter drains in rear of stalls shall drain into sewer in such manner as to fully comply with provisions of



"The Building Law" of the City and County of San Francisco.

Every person, firm or corporation now and hereafter maintaining any stable or other place in which manure or stable refuse accumulates shall provide a galvanized iron, tin, zinc or other metal lined box or bin within the area walls of the stable; said box or bin shall be vented by means of a duct or flue not less than 12 inches square extending through the roof. The termination of said vent shall be carried above the roof of adjoining premises, and in no instance be less than ten feet from any window or light well.

All manure or stable refuse must be removed from the stable at least semi-weekly, and at all times shall such stable or other place, and every part and appurtenance thereof, be kept in a clean and sanitary condition.

No ventilators or windows which may be used as ventilators shall be constructed in the area walls of the stable if within ten feet of adjacent property lines, except by special consent of the Board of Health, which must appear on the face of stable permit.

All stables must be ventilated by means of louver ventilators in the roof, or by openings in area walls where said walls are more than ten feet from adjacent property lines, except as herein provided.

Every stable or other place where horses, mules, cows or other animals are kept must have not less than 1,000 cubic feet of air space in the clear for each and every animal kept therein.

It shall be unlawful for any person, firm or corporation to use any stable or other place where animals are kept as a place of storage for fruits, vegetables, meats milk or any other foodstuffs.

All feed excepting hay shall be kept in a metal lined bin or metal lined room, so constructed as to be rat-proof.

The provisions of this Ordinance shall apply to all stables that shall hereafter be conducted in structures which are now existing but are not used for stable purposes at the date of the passage of this Ordinance.



## Floors in Certain Places Where Food Stuffs Are Prepared and Sold.

Section 199. All floors of buildings used as fish markets, bakery shops, sausage factories, candy factories, and other places where food stuffs are prepared for sale, hereafter established shall be constructed of concrete or other fireproof material covered with a wearing surface of cement or asphaltum and carried up on all walls at least eight inches; or, if of wooden construction such floor shall be covered with waterproof material, the same to run up on the walls at least eight inches in height. Over this waterproof material shall be placed a wearing surface of concrete not less than two inches in thickness troweled to a smooth surface or of mastic not less than one inch in thickness. Said wearing surface shall be carried up on walls to the top of the before mentioned waterproof material.

All floors of meat markets, butter shops, vegetable stores, delicatessen stores, restaurants and bakery stores, hereafter established, must be constructed of two layers of boards driven tight; and each layer not less than one inch in thickness; and between said two layers shall be placed galvanized iron cloth of not less than No. 20 gauge wire whose mesh is not more than one-half inch. Said cloth shall extend over the entire area of floor and up on all walls at least eight inches in height, and shall be covered by a baseboard nailed to said walls. (See also Ordinance No. 2917, New Series.)

## PART XIII.

### GENERAL PROVISIONS.

#### Explanatory.

Section 200. The following general provisions shall apply to the construction of all buildings of all classes contemplated in this Ordinance unless specific exceptions or definite clauses under the various classes of buildings be made, in which case the said specific exceptions and definite clauses shall govern.

## **Communicating Openings in Exterior, Division and Party Walls. Fire Doors.**

Section 201. Openings through exterior, division or party walls, except of frame buildings, whereby communication is made with an adjoining building or room, shall not exceed eight (8) feet in width, shall have standard fire doors constructed and arranged as hereinafter specified at each side of such openings, and not more than one (1) such opening shall be allowed in every fifty feet or portion thereof of said walls in any one story.

All such fire doors shall be closed at night, or when the building is closed down, and shall be automatically self-closing by the action of one (1) or more fusible links placed near the ceiling over each door.

### **Standard Fire Door, Construction of.**

Section 202. All fire doors shall overlap the walls at least four (4) inches at sides and top. Sills shall be of metal at least one-quarter ( $\frac{1}{4}$ ) inch thick on masonry, or of masonry, and have horizontal faces extending under fire doors and outer edges flush with outer surface of fire doors.

Top of sliding doors shall conform to incline on the track, which shall be three-quarters ( $\frac{3}{4}$ ) inch to the foot. No door shall be hung on wooden frame or in contact with any woodwork.

Doors shall be made of three (3) thicknesses of seven-eighths ( $\frac{7}{8}$ ) inch by six (6) inch tongued and grooved redwood boards, surfaced both sides, the outer thicknesses to be vertical and the inner thickness to be horizontal, nailed with clinched nails.

Doors shall be entirely covered with good tin plate ("IC" charcoal, 109 lbs. to the box), not over fourteen (14) inches by twenty (20) inches in size, laid with locked joints covering nail heads, and all vertical seams shall be double locked. No solder shall be used.

All doors shall have hinges, hangers, latches and chaffing strips of wrought iron bolted to the doors, and shall have steel tracks and wrought iron stops and binders bolted through the wall. Swinging doors shall have wall eyes of wrought iron built into the wall.

### **Standard Fire Shutters, When Required.**

Section 203. Every opening in any exterior masonry wall of any building over 25 feet, or two stories in height, except dwellings, churches, school houses, hotels, apartment houses, lodging houses boarding houses, office buildings, municipal buildings, hospitals, asylums, convents and sanitariums, but including every opening in exterior masonry walls of every building where said opening faces on the lot line, lot line court, or on rear yard, which is within, or shall at any time come to be within 30 feet in any direction of any portion of another building; shall have standard fire shutters, or self-coiling, rolling corrugated steel shutters or doors.

Wired glass not less than  $\frac{1}{4}$  of an inch thick in metal sashes and frames shall be deemed an equivalent of and a substitute for fire shutters.

All doors and shutters opening upon fire escapes and at least one row vertically above the first story, shall be so arranged as to be readily opened from the outside by firemen, and those opening upon the first story shall have locks so arranged as to admit of easy destruction by the Fire Department. Rolling steel shutters above the first story shall not be locked or fastened on inside. All such shutters or doors shall be closed at night, or when the building is shut down.

### **Standard Fire Shutters, Construction of.**

Section 204. Fire shutters shall overlap the outside of the wall at least 4 inches at top and sides, or be close-fitting against masonry work inside of opening, but shall not be hung on wooden frame or come in contact with any woodwork.

Shutters shall be made of two thicknesses of  $\frac{7}{8}$ -inch by 6-inch tongued and grooved redwood boards, surfaced both sides, crossed at right angles and nailed with clinched nails.

Shutters shall be entirely covered with good tin plate. "IC" charcoal, 109 pounds per box, in sheets not over 14 by 20 inches in size, laid with locked joints covering nail heads, and all vertical seams shall be double-locked. No solder shall be used.

Shutters shall be hung on substantial wrought iron

pin or eye blocks built into the wall, and shall have wrought iron hinges, catches, and bars bolted to the shutter.

### **Limiting Percentum of Lot Occupied by Building for Three or More Families.**

Section 205. No building which is intended or designed for, or used as a home or residence of three or more separate and distinct families or households, shall occupy more than ninety (90) percentum of a corner lot, or more than eighty (80) percentum of any other lot, provided that the space occupied by fire escapes, erected and constructed according to law, shall not be deemed a part of the lot occupied.

For the purpose of this section when a lot runs through from street to street, or from street to alley, one-half of the rear street or alley may be considered as a portion of the lot to be left uncovered, provided that if said rear street or alley be more than twenty feet wide, only ten feet of the street or alley may be considered as a portion of the lot in computing the percentage to be left uncovered.

### **Opening in Rooms—Courts, Yards and Air Shafts.**

Section 206. In all rooms in dwellings, houses, hospitals, schools, apartment houses, tenement houses and other buildings erected for the purpose of housing human beings there shall be at least one window opening upon a street or upon a court or yard which shall be open to the sky. Such window opening shall have at least ten square feet area and the sash must be arranged to open at least one-half the window area.

The above courts, if inner courts, shall have areas not less than the following:

	Sq. ft.
For courts one-story high .....	50
For courts two stories high.....	60
For courts three stories high.....	80
For courts four stories high.....	100
For courts five stories high.....	120
For courts six stories high .....	140
For courts seven stories high .....	160
For courts eight stories high .....	180



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Lot line courts shall have areas not less than seventy-five (75) per centum of the above for the respective heights.

### **Ventilation of Water Closets, Etc.**

Section 207. Air shafts ventilating compartments containing baths, water closets, urinals, slop or scullery sinks, shall be constructed according to the provisions of "The Plumbing Law" of the City and County of San Francisco.

### **Intakes for Inner Courts.**

Section 208. In buildings which shall be intended or designed for, or used as, the home or residence of three or more separate and distinct families or households, every inner court including lot line courts shall be provided with one or more horizontal intakes of fireproof material at the bottom. Such intakes shall always communicate directly with the street or yard and shall have a total area of not less than 9 square feet for each court. Such intakes shall have open grills of the full area required for intakes.

### **Ground Floor Pipe Casings.**

Section 209 (as amended Nov. 30, 1917). Every building already erected in said City and County except such as have been and now are equipped in compliance with the requirements of Section 209 of Ordinance No. 1008 (New Series), approved December 22, 1909, and every building hereafter erected in said City and County where the basement thereof is being used for the storage of goods or merchandise of any description shall be provided with ground floor pipe casing holes constructed in and through the floor of the first story of such building, extending down to and even with the basement ceiling or bottom of floor joists of such first story floor. Such ground floor pipe casing holes shall be constructed according to the plans therefor on file in the office of the Board of Public Works of the City and County and shall be located and of such number as may be determined upon by said Board of Public Works after a consultation held for the purpose with the Chief Engineer of said Fire Department, or Assistant Chiefs, or Battalion Chief thereof, such number to be



# Ground Floor Hose Pipe Casings



Nos. 220 and 221  
Standard depth 12 inches

No. 220—Hose Pipe Casings with iron ring and brass cover as required by Section 209 of Ordinance No. 1008 (New Series), San Francisco Building Laws.

No. 221—Hose Pipe Casings with polished brass ring and cover for marble or tile vestibules, well finished stores, offices and hotel lobbies.

These Hose Pipe Casings are of heavy construction to withstand trucking or heavy loads passing over them. The cover, which fits flush with the floor, is easily lifted by a recessed handle.

These Ground Floor Pipe Casings conform with Ord. XIII, Sec. 209, San Francisco Building Laws, 1927

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one (1) to every nine hundred (900) square feet of floor surface or part thereof.

Section 210. No goods or merchandise of any description shall be stored in any such basement, in such manner as to interfere with the proper working of the water circulating nozzle used by said Fire Department, which will pass through any of such ground-floor pipe-casing holes; and no goods, merchandise or any other obstruction shall be placed over the cover of any such ground-floor pipe-casing holes, on the floor of the first story; and all such covers must at all times be kept clear of all obstructions, so as not to interfere with their prompt use by said Fire Department.

Section 211. The Board of Public Works shall notify the owners of all buildings now erected, where the basements are used for the storage of goods or merchandise of any description, to place such ground-floor pipe-casings through the floor of the first story within thirty (30) days of said notice.

Section 212. No plans of any building hereafter to be erected shall be accepted or approved by the said Board of Public Works unless the plan of the first floor thereof over a basement which is to be used for storing goods or merchandise of any description shall show that ground-floor pipe-casing holes have been provided for which will permit the said Fire Department to put a water circulating nozzle through, and that the same are to be constructed according to the plans therefor on file in the office of the said Board of Public Works.

### **Access at Sidewalk to Water, Gas and Electric Services.**

Section 213 (as amended Dec. 4, 1917). Every building except buildings occupied by one family only, or by two families and not over two stories high and having independent entrances, shall be provided with an enclosure or enclosures constructed of incombustible material located immediately within the curb of and beneath the sidewalk in front of said building. Access to such enclosure shall be afforded through an opening in its top, which opening shall have a suitable locked iron cover, set in the sidewalk. Fastenings to all such covers shall be identical and shall conform

to sample in the office of the Chief of the Fire Department, and also at the office of the Chief Building Inspector of the Board of Public Works. Such enclosure shall contain a shut-off valve which shall relate to gas service only for such building and which shall be clearly tagged and marked. Where more than one lead goes into a building each gas pipe shall be equipped with the regular shut-off valve.—As amended by Ordinance No. 4408, N. S.)

Also see Ord. 11.83, app. June 13, 1932.

### Openings in Sidewalks.

Section 214. All openings hereafter constructed in sidewalks for sidewalk elevators shall be located in the outer half of the sidewalks, next to the curb. The outer edges of said openings shall be not more than 30 inches from the outer line of the curb.

The length of the sides of said openings parallel with the curb shall not exceed seven feet. The length of the sides of said openings at right angles to the curb shall not exceed one-half the width of the sidewalk and in no case shall such length exceed five feet.

Openings in sidewalks for the admission of coal or light, or for manholes or for any other purpose, if placed outside the property line shall be covered with lens lights, set in iron or cement frames, or with iron covers having a rough surface and rabbeted flush with the sidewalk.

No plain surface of glass or iron more than four inches in diameter shall be placed in any sidewalk. When a cover is placed in any sidewalk, it shall be placed as near as practicable to the line of the curb, except for steps and area ways. All spaces under sidewalks shall be thoroughly ventilated.

All works supporting the sidewalk shall rest upon and be of incombustible material. (See also Ordinance No. 2189, New Series.)

### Areas.

Section 215. All areas set back from the street line shall be properly protected with suitable railings, or covered over; those on the sidewalk shall have iron

doors, which shall be so made that when opened they will form guards.

When areas are covered over, iron or iron and glass combined, stone or other incombustible materials supported on brick, concrete or stone walls, or on iron or steel beams shall be used. Areas on sidewalks shall not exceed three (3) feet in width measured from the street line.

### Floors in Yards, Etc.

Section 216 All floors of yards, courts and passageways shall be of earth, sand, gravel, cinders or other similar material or of concrete. No such floors shall be constructed of wood.

### Floor Lights.

Section 217. Floor lights used for transmission of light to stories below shall be constructed of metal frames and bars or plates, and if any glass therein measures more than 16 square inches the glass shall be provided with a mesh of wire, either in the glass or under the same, and the floor lights shall be of the same proportional strength as the floors in which they are placed.

### Stairs.

Section 218. In every building there shall be at least one stairway leading from all upper floors to the first or ground floor with access to the street; and there shall be at least one stairway from every basement to the ground floor.

Every building of more than 2,500 and less than 7,500 square feet area on the main or ground floor shall have one main stairway from the first to second floor, and above the second floor one stairway at least three (3) feet wide. In addition there shall be a second stairway above the second floor not less than two (2) feet wide; such stairway shall be removed as far as possible from the main stairway, but shall be accessible from the halls and shall extend to the top floor of the building.

In every building having an area of 7,500 or over and less than 10,000 square feet, said second stairway shall be at least 2 feet 6 inches in width and shall extend to

the ground floor level and open to a street, alley or to a court having access to a street or alley.

In all buildings of 10,000 square feet or over in area on the main or ground floor one stairway shall be provided in addition to the two mentioned above, which shall be not less than three feet wide; a reasonable separation of the three stairways shall be required.

Every building having an area of 12,500 square feet or greater shall have at least one continuous stairway enclosed with suitable walls of brick, burnt clay blocks, reinforced concrete or such other fireproof materials and form of construction as may be approved by the Board of Public Works; said walls or construction shall be continuous and extend at least three feet above the roof. All doors opening in such stair hall enclosures shall be provided with self-closing fireproof doors and frames of metal and the sash and frames shall be of metal and glazed with wire glass. All such fireproofed stairways must have direct communication with a street or alley, through a passageway fireproofed as indicated for stair enclosures.

In every building a fire escape may take the place of one otherwise required stairway, provided said fire escape is connected directly to a public hallway or public space. The fire escape may take the place of a stairway beginning at the second floor level, not of a stairway required to ground level.

Stairways in Class "A" and Class "B" buildings shall be built of metal or reinforced concrete; stairways in Class "C" or frame buildings may be of metal or timber.

Builders' Exchange Box 202

## **E. D. PHILBRICK CO.**

### **STAIRWORK**

41 SHERIDAN STREET

SAN FRANCISCO

Telephone HEmlock 7881



### Obstruction on Stairs.

Marble treads, if used, shall have metal supports on all sides.

Section 219. Stairs or stairways passing from one floor to another in any building shall not be covered with a permanent flooring, but may be closed with a board partition extending from the floor to the ceiling, and provided with a door, which must be kept free from all obstruction at all times, so as to give to the Fire Department and Fire Patrol easy access from one floor to another, provided this section shall not apply to buildings used for public assemblages.

Goods or obstructions of any kind shall not be placed on the stairs of any building.

Explosives or inflammable compounds, or combustible materials, shall not be stored or placed under any stairway of any building, or used in any such place or manner as to obstruct or render egress hazardous in case of fire.

### Scuttles and Ladders.

Section 220. All buildings over 25 feet high shall have permanent means of access to the roof from the inside, with ladders or stairs leading thereto and accessible to all occupants. The openings in the roof shall not be less than 24x36 inches, and when ladders are placed on the exterior of any building they shall be constructed of metal and bolted through the walls of said building at each story with not less than  $\frac{5}{8}$ -inch bolts, with the nuts and washers to show on the outside of the building. Said ladders shall be placed not less than 8 inches from the walls of buildings, and shall extend at least two feet above firewalls or roofs of buildings, and shall be securely fastened at top.

Size of metal for ladders 2 inches x  $\frac{3}{8}$  inches, 18 or more inches apart.

Size of rungs for ladders  $\frac{3}{4}$ -inch in diameter.

The braces carrying ladders shall be  $1\frac{1}{2}$  inches by  $\frac{1}{2}$  inch, bolted through the building.

Where the ladders join they shall be connected and bolted with not less than four bolts on each side.

Screws or lag screws shall not be used in the construction of said ladders.



In frame buildings where the studding does not correspond with the measurements for ladders, extra headers shall be inserted between the studding, of the same thickness as the studding and securely spiked.

### **Engineers' Stationary Ladders.**

Section 221. Every building in which boilers are placed in the cellar or lower story shall have stationary iron ladders or stairs from such story leading directly to a manhole in the sidewalk or to inside exits.

### **Passages to Exits Required in Certain Buildings.**

Section 222. All buildings used or occupied or constructed to be used or occupied as hospitals, asylums, seminaries, hotels, apartment houses, tenement houses, lodging houses, schools or work shops shall have on each floor a passage free and unobstructed, leading direct to each fire escape.

The following are exempt from the above requirement:

- 1.—All buildings of Class "A" and "B" construction.
- 2.—Apartment houses where every apartment has direct access to a fire escape, which either faces on a street, or from which there is a direct passage to the street.
- 3.—All buildings not exceeding in width thirty (30) feet outside measurement and not situated on a street corner.

The Board of Public Works shall determine the location of all passages and exits thereto necessary and adequate on all such buildings hereinbefore specified, so as to make the means of escape therefrom easy and safe in case of fire or panic.

The minimum width of passages to exits shall be as follows:

To an exit on a buildings with a frontage of from thirty (30) feet to forty (40) feet, two (2) feet and six (6) inches wide.

To an exit on all buildings over forty (40) feet frontage, three (3) feet wide, **provided, however,** that the width of passages to exits shall be increased to from three (3) feet to four (4) feet six (6) inches, at the dis-

cretion of the Board of Public Works, in case of hospitals, asylums, large hotels and other buildings where more than the usual number of people congregate or are housed.

All buildings, if containing more than four (4) apartments or suites on any one floor, shall be provided with at least two (2) staircases, which shall be placed as far apart as circumstances will allow, but in no case shall said staircases be placed within thirty (30) feet of one another.

### **Exits for Frame, Lodging, Apartment and Tenement Houses, Hotels, Hospitals and Asylums.**

Section 223. Frame buildings used as lodging, apartment and tenement houses, hotels, hospitals, or asylums shall have on each floor open halls at least three feet and six inches wide, which shall lead to all fire escapes.

### **Fire Escapes.**

Section 224. For the proper and necessary protection of life and property, all buildings hereinafter designated in this section and Ordinance, that are already erected and built or that may be hereafter erected and built in this City and County, shall be provided and equipped with fire escapes and stand pipes, as follows:

Every building that is occupied or so constructed as to be occupied by two or more families on the third story, not having proper and sufficient exits or facilities for escapes in case of fire, and every building of four or more stories in height, and every building used or occupied or so constructed as to be occupied as a theatre, hospital, tenement house, apartment house, lodging house, or for a factory, mill or manufactory or for offices, workshop or public entertainments or assemblages, above the second story, and every school building of more than two (2) stories in height, shall be provided and equipped with metallic fire escapes combined with suitable metallic balconies, platforms and railings firmly secured to the outer walls, and erected and arranged in such a way and in such proximity to one or more windows or to as many windows of each story above the first as may be necessary to make and render

said fire escapes readily accessible, safe and edequate for the escape of the inmates in case of fire, and when placed on the rear or sides of buildings not adjoining a street they shall extend down to within 8 feet of the ground.

Said fire escapes shall extend from the level of the ceiling of the first story to and over the roof, and shall be either vertical metallic ladder fire escapes, metallic stair fire escapes, or other approved fire escapes. The Board of Public Works, after approval by the Fire Wardens, shall determine the kind, construction, location and number of fire escapes, necessary and edequate on all buildings to make the means of escape therefrom easy and safe to the inmates in case of fire.

All fire escapes shall be erected and built as required by the provisions of section 225 of this Ordinance, and shall at all times be kept in good order and repair, and free from any and all obstructions.

Every building used as a hotel, lodging house, hospital, tenement house, apartment house, factory, mill or manufactory, shall be provided with a portable, metallic ladder of sufficient length to extend from second story balcony to sidewalk; said ladder to be hung from third story balcony when not in use.

### **Specifications for the Erection and Construction of Fire Escapes.**

Section 225. Where a vertical metallic ladder is required, it shall be constructed according to the following requirements:

Size of metal for ladder,  $2 \times \frac{3}{8}$  inches.

Size of rungs for ladder,  $\frac{3}{4}$  inch diameter.

Size for grating bars for balconies,  $1\frac{1}{2} \times 5-16$  inches.

Size of cross-bearing bars, carrying grating,  $1\frac{1}{2} \times \frac{3}{8}$  inches.

The outside frames of all fire escapes carrying the gratings shall be 2-inch angle iron, shall extend all around the platform, and they must be bolted through the building.

The size of the bearing metal carrying platforms shall not be less than 2-inch channel iron, and the

braces carrying the same shall be  $1\frac{1}{2} \times \frac{1}{2}$  inches, and must be bolted through the building.

The top rail of the balconies eight feet or less in length shall be  $1\frac{1}{2} \times \frac{3}{8}$  inches, balconies over eight (8) feet in length shall have in center one (1) extra rail of the same size as the top rail.

The trimmings for finishing outside rails shall be  $\frac{3}{4} \times \frac{1}{4}$  inch.

The height of railings of balconies shall not be less than two feet six inches, and the width of balconies not less than three feet.

All rails and bearing beams shall extend through the wall, or studding, and have washers and nuts on the same.

Where the vertical ladders join they shall be connected and bolted with not less than four bolts on each side.

Screws or lag screws shall not be used in the construction of fire escapes.

All balconies shall be constructed with circular corners.

All nuts shall show on outside of buildings.

Openings in balconies shall not be less than two (2) feet square.

Brackets carrying platforms shall not be more than five (5) feet apart.

Perpendicular ladders shall be at least eight (8) inches from the building.

Finishing on balconies shall not extend outside the rail.

Gratings on platforms shall be placed flat and the grating bars of all platforms shall not be more than one (1) inch apart, and in all cases be made of iron or steel.

All brackets carrying balconies shall be bolted through the entire walls or studding; the bolts shall not be less than seven-eighths of an inch, and they shall have nuts and washers.

In frame buildings where the studding does not correspond with the measurements for balconies and lad-

ders, extra headers shall be inserted between the studing and shall be of the same thickness of the studing, and securely spiked.

Where metallic stair fire escapes are required they shall be constructed according to the following requirements:

Balconies shall be placed upon buildings as the Board of Public Works may direct.

Where the brackets support the stairs or stair fire escapes the brackets shall be constructed of three-inch channel iron.

The platform of balconies shall be the same as required for vertical ladders, and shall be placed on the line of the top of the flooring of each story.

Said platforms shall be supported upon iron brackets, not more than five (5) feet apart, and shall in all cases be built into and anchored to the walls of masonry, during the construction of said walls, and shall go through the entire thickness of said walls, and must be securely fastened on the inside of the building.

The width of all balconies from the face of the wall out, shall not be less than three (3) feet six (6) inches, and the length of all balconies shall be regulated by the Board of Public Works.

In the floor or platform of all balconies there shall be an opening, not less than two feet wide, and three feet six inches long, enclosed and protected on three sides.

The railings and balconies shall be constructed as required for ladder fire escapes. There shall be a communication from balcony to balcony by means of inclined stairs, and no ladder will be allowed below the line of the flooring of the uppermost story of any building.

Said stairs shall have an inclination from the perpendicular of not less than four inches to every twelve inches of rise, and shall be made of side stringers of not less than 4x $\frac{1}{4}$ -inch steel; treads must be turned down on ends, and riveted well into each stringer, at a distance apart of 16 inches for said inclination.

All such stairs must be provided with substantial railings of 1 $\frac{1}{4}$ -inch pipe; the sides shall be well sup-



ported by suitable standards of  $1\frac{1}{4}$ -inch pipe, at proper distance, viz.: four standards to each run of steps, and thoroughly bolted to the stringers.

The ladders extending from the upper balconies to the roof may be perpendicular, but must be well braced with iron brackets.

### **Meter Rooms.**

Section 226. All buildings hereafter erected shall be provided for the accommodation of gas and electric service and meters, with recesses, enclosures, or openings not less than four (4) feet by four (4) feet in dimensions, and if a door leads thereto, said door shall be of dimensions not less than two (2) feet by four (4) feet, and shall have a ventilating screen at its top and bottom.

Suitable brackets or shelves shall be provided to support gas meters securely.

The electric service switches and meters shall not be installed in the same recess, enclosure or opening with a gas service and meter.

The aforesaid work shall be performed under the supervision and to the satisfaction of the Light and Water Inspector of the City and County.

### **Awnings, Shades and Balconies.**

Section 227. All awnings, shades and balconies shall be at least ten (10) feet above the line of the curb level and securely supported on wrought iron brackets built into the walls, and no part shall be less than ten (10) feet above the line of the curb level of the sidewalk, and a gutter shall thereon be formed to carry off the water to the line of the building and thence to the street gutter.

No gutters shall be required on cloth or canvas awnings or shades.

The height of all movable canvas or cloth awnings or shades shall not be less than  $7\frac{1}{2}$  feet above said curb level.

Awnings, shades and balconies shall not extend beyond the line of the curb, provided, however, that no awning, shade or balcony shall be erected on any building facing on any street, lane, alley or place which is



twenty (20) feet or less in width; and no permanent awning, shade or balcony shall be constructed on any building within the fire limits unless the same be constructed of metal only or of metal and wire glass, and all cloth and canvas awnings shall be kept raised except where the sun shines on the spot to be protected by the same.

### **Rat-Proofing Basements.**

Section 228. All buildings shall be made so as to be impervious as possible to the ingress of rats and other vermin.

The foundation walls shall be of concrete or of brick or of stone laid in cement mortar or of some equally rat-proof material, shall extend at least one foot above the surface soil, and shall be at least eight inches thick at the top; and where openings are necessary for ventilation or other purposes, said openings must be made rat-proof by suitable metal screens.

The full floor area under all buildings must be covered by concrete at least one and one-half inches thick, except where the surface of the soil is composed of rock; provided, however, that outside of the following described district, buildings occupying a ground space of not more than eight hundred square feet need not comply with the foregoing provision, provided that such buildings are elevated at least 18 inches above the surface of the ground and the walls supporting the buildings are left open upon three sides and the space under such buildings exposed.

The district to which the foregoing exception shall apply shall be all that portion of the City and County not included within the following boundaries: Commencing at a point where Channel street intersects the waters of the Bay, thence along Channel street south to Division street, along Division street to Harrison street, along Harrison street to Army street, along Army street to Castro street, along Castro street to Seventeenth street, along Seventeenth street to Stanyan street, along Stanyan street to Fulton street along Fulton street to Thirteenth avenue, along Thirteenth avenue to the Presidio wall, along the Presidio wall to

Lyon street and along Lyon street to the waters of the Bay and along the waters of the Bay to the point of commencement.

### **Protection in Walls Against Vermin and Fire.**

Section 228A. There shall be placed under the first floor plates in all exterior walls and interior supporting partitions, where wooden joists are used, a vermin and fireproof material, which shall extend the full width of the plate and for not less than two inches beyond the plate and underlapping the flooring. The same material is also to be placed around and close up to chimneys and pipes at first floor, and to underlap flooring not less than two inches. All shall be placed in such manner as will positively close up all openings and prevent the passage of vermin and fire draughts.—(Added by Ordinance No. 1165, N. S.)

### **Bay Windows.**

Section 229. Bay, oriel and swell windows shall not be constructed in buildings of Class "A," Class "B" or Class "C" excepting at those corners or blocks whose enclosing sides form an angle of less than 90 degrees; provided, however, that windows of horizontal, circular or angular shape may be constructed in Class "A," Class "B" and Class "C" buildings which shall form bays in the thickness of the wall; provided further that no portion of the outside face of such windows shall project beyond or below the belt course or cornice over the first story of such building nor in any case project more than sixteen inches from the face of the wall of the building to the vertical face of such projection.

Such bay windows in Class "A" and Class "C" buildings shall have structural frames of steel channel or I beam uprights not less than four (4) inches in vertical section, all joints and bearings with standard connections riveted, the uprights shall be properly connected together horizontally with steel channels, angles or tees below the sill and above the head of each window in each story and the whole steel frame thoroughly

anchored to the brick walls in each opening, the outside finish of all such bay windows shall be of galvanized iron or other fireproof material.

In Class "B" buildings bay windows and lintels over same shall be constructed entirely of reinforced concrete.

Piers between bay, oriel or swell windows in brick, stone or concrete buildings shall not be less than four (4) feet in width, for buildings not more than three (3) stories in height; five (5) feet in width for buildings not more than five stories in height, and six (6) feet in width for buildings not more than six (6) stories in height and seven (7) feet in width for buildings not more than eight (8) stories in height.

The openings for bay, oriel or swell windows in brick, stone or concrete walls shall have steel beams of proper length to support the floors and loads; these beams must extend at least eight (8) inches into the wall at both sides of the openings.

### **Bay Windows on Frame Buildings.**

Section 230. Bay, oriel or swell windows in frame or wooden buildings may project not more than thirty-six inches over the street line, measured to the finish; and not more than three (3) feet from the face of the building; they must not be more than ten (10) feet wide, measured from end to end, and the finish of their soffits must be at least ten (10) feet above the sidewalk, unless the window is entirely back of the street line.

Bay windows shall not be allowed to project over streets when said streets are less than thirty-five (35) feet wide.

### **Skylights.**

Section 231. Skylights in buildings of Classes "A," "B" and "C."

All skylights in buildings of Class "A," Class "B" or Class "C" shall be self-supporting and the frames and sashes thereof shall be constructed of metal and glazed only with wire glass not less than one-quarter of an inch thick.

Skylights in theatres shall be constructed according to the requirements of Section 178 of this Ordinance.

### **Skylights in Frame Buildings.**

Section 232. All skylights in frame buildings on roofs projecting at an angle less than twenty-two and one-half ( $22\frac{1}{2}$ ) degrees, not enclosed by a substantial railing at least three (3) feet high shall be protected by screens of No. 10 wire with meshes not more than one and one-half ( $1\frac{1}{2}$ ) inches square, which screens shall be secured to the sash and must be kept at least four (4) inches above the glass.

If skylights are glazed with wire glass not less than one-quarter ( $\frac{1}{4}$ ) inch thick, the wire screens may be omitted.

### **Cornices, Belts, Gutters and Pergolas.**

Section 233. All extension cornices, belts, gutters and other appendages on Class "A," Class "B" and Class "C" buildings shall be constructed of metal, stone, reinforced concrete or terra cotta.

All metal cornices shall be riveted and well secured to iron brackets not more than two feet apart, and properly built into the walls. Cornices of frame buildings may be of wood.

Gutters of metal may be formed in cornices. Proper leaders shall be provided for discharge of rain water from roof, but no leader shall discharge upon the sidewalk.

Stone and terra cotta cornices shall have every piece anchored to backing with heavy anchors, and where necessary supported on steel supports.

Appendages of Class "C" buildings, ventilators, erections on roofs, turrets, lantern lights, if not wholly fireproof within the fire limits, such as dormer windows, mouldings, eaves, parapets, balconies, bay windows, towers, spires, shall be enveloped with fireproof material, provided, however, that any of the said appendages which exceed the allowed limits of height of its class shall have its exterior wholly fireproof.

Appendages of frame buildings used as "pergolas" or "wind shelters," which exceed the allowed limit of height of said frame buildings, shall have such construction if not wholly of fireproof material enclosed with fireproof material; however, such construction on roofs shall not exceed thirty-three and one-third ( $33\frac{1}{3}$ ) per

cent of the area of said roof, and the limit shall not exceed eight (8) feet from roof covering; and further, no roof or covering shall be permitted upon said "pergola" or "shelter" and the same, if enclosed above the height of three (3) feet shall be of glass only.

The floor of all drying platforms and pergolas attached to roofs of any hotel, tenement house or lodging house shall be close boarded and covered with fireproof material, and the open space on all sides of said platforms between the flooring and roof shall be close boarded and covered with fireproof material from the edge of floor to within one inch of roof.—(As amended by Ordinance No. 5392, N. S.)

### **Employees' Rest or Recreation Rooms**

Section 233-A. Employees' Rest or Recreation Rooms may be constructed on roofs of Class "C" buildings, provided the same are of fireproof construction, and not to exceed thirty-three and one-third (33 1-3) per cent of the roof area of said Class "C" building and the height thereof shall not exceed nine (9) feet above the roof, and such structure shall have at least two proper exits as a means of egress therefrom. It is further provided that rest or recreation room structures shall be equipped with a complete automatic sprinkler system in strict accordance with requirements of the Board of Fire Underwriters of the Pacific, under provisions governing Class "C" buildings.—(Added by Ordinance No. 6096, N. S.)

### **Porches of Wood.**

Section 234. Porches of wood may be attached to buildings of Class "C" but not to buildings of Class "A" nor class "B," and shall be constructed without concealed spaces in any part, and without enclosures other than open rail or wire guard not over four (4) feet above floor, except as hereinafter specified. Said porches must not be placed higher than the fourth story of any building, nor project over the line of any street, lane, alley or place.

Enclosures on such porches shall not exceed seven (7) feet from floor to ceiling, and shall not, for a hotel



or lodging house, exceed fifty (50) superficial feet of floor room, or for any other building exceed twenty-five (25) superficial feet of floor room, and shall be used only as water closets or privies.

Roofs of both porches and enclosures, also the entire exterior of enclosures shall be covered with tin in the manner specified in Sections 202 and 204 of this Ordinance for covering fireproof shutters and doors, or with corrugated iron nailed to stud frame without boarding.

### Roof Covering.

Section 235. The supporting portion of all roofs shall be in accordance with the structural requirements of the building. Outside the fireproof roofing limits, as outlined in Section 4 of this Ordinance, roofs may be covered with shingles. Within the fireproof roofing limits the roofs of all classes of buildings hereafter erected shall be covered with either metal, slate, tile terra cotta, asbestos shingles, two layers of prepared roofing, each layer weighing not less than thirty-five (35) pounds per one hundred square feet, or at least four layers of saturated roofing felt, each layer weighing not less than fourteen (14) pounds per one hundred square feet, provided that said two layers of prepared roofing, and said four layers of saturated roofing felt, shall be cemented together with asphaltum and then covered with a flowing coat of asphaltum, in which shall be imbedded clean screened gravel of sufficient quantity to thoroughly cover the surface, said gravel shall pass through a screen whose meshes do not exceed five-eighths ( $\frac{5}{8}$ ) of an inch square and be rejected by a number six (No. 6) screen. Provided further that said four plies of said saturated felt shall be laid over a dry sheet of unsaturated felt on all roofs inside the fire limits as prescribed in Section 3 of this Ordinance, where wood sheathing is used. Or by three (3) layers of pure asbestos roofing, composed of two (2) saturated layers and one (1) unsaturated layer, all cemented together with asphaltum when laid each sheet separately on the building, and weighing not less than sixty (60) pounds to the one hundred (100) square feet; said three (3) layers of asbestos roofing to be laid on top



of a sheet of unsaturated asbestos weighing not less than twenty-two (22) pounds to each one hundred (100) square feet of surface.

For roofs damaged to the extent of 40 per centum, see Section 4 of this Ordinance. The supports, rafters and all parts of roofs within the fireproof roofing limits, rising at any point to a height of more than twenty (20) feet from the top of masonry walls, shall be built of fireproof material.

### **Mansard Roofs.**

Section 236. Mansard or other roofs of like character having a pitch of over sixty (60) degrees, placed upon any Class "C" building, shall be constructed only of an iron or steel frame, lathed with iron or steel on the inside and plastered or filled in with fireproof material not less than three (3) inches thick. The outside of such roofs shall be covered with metal, slate, tile, terra cotta, a 3-ply pure asbestos roofing as specified in Section 235, asbestos shingles or asbestos building lumber not less than one-eighth ( $\frac{1}{8}$ ) of an inch in thickness.

No such mansard roof shall be so placed upon any building that any portion of such mansard roof shall be more than the allowed height from the ground level.

### **Elevators.**

Section 237. The strength of the ropes, gearing and all other portions of the mechanism of passenger elevators shall be calculated with a factor of safety of twenty figured from the actual static loads.

For all other elevators ten is to be used as the factor of safety; also figured from actual static loads.

The main suspension ropes or cables of all elevators used for passenger or freight must be noncombustible material.

Every elevator shall be provided with approved devices for preventing the car from falling in case of accident.

All freight elevator shafts must be provided at each floor through which they pass with latest and best appliances, style and design of automatic closing safety gates.

Doors opening into passenger elevator shafts shall be entirely under the control of the operator and shall be so arranged that they can be opened from the inside.

Elevator cabs shall be so covered with wire screens as to protect passengers from falling machinery. Every part of the elevator shaft shall be protected by a metal grill when not enclosed. At the top of the elevator shaft and directly under the machinery there shall be placed a fixed wire screen of sufficient strength to hold any falling machinery.

### **Sidewalk Elevators.**

Section 238. It shall be unlawful for any person, firm or corporation to construct, operate or use, or cause to be constructed, operated or used any sidewalk elevator unless the shafts or sidewalk openings of such sidewalk elevators, be covered with substantial iron doors, or iron gratings, as nearly flush with the upper surface of the sidewalk as will permit proper drainage, and unless such doors or gratings be provided with some mechanical device for locking and unlocking them which will not require any person to ride on such elevator for the purpose of locking or unlocking said doors or gratings.

It shall be unlawful for any person, firm or corporation to construct, operate or use, or cause to be constructed, operated or used any sidewalk elevator unless the same shall be equipped with some mechanical device which will prevent the platform of said elevator from approaching within less than five (5) feet of the sidewalk doors or gratings thereof when the said doors or gratings are closed.

It shall be unlawful for any person to open any sidewalk elevator doors or gratings unless he is directed or permitted by the person, firm or corporation using said elevator to open such doors or gratings. And it shall be unlawful for any person, firm or corporation operating or using such sidewalk elevator to open or cause to be opened the elevator doors or gratings thereof unless a responsible person connected with the person, firm or corporation operating or using said elevator shall be stationed on the sidewalk immediately ad-

jacent to said doors or gratings, who shall lift said doors or gratings by hand, except that, if they are automatically lifted from below upon the raising of such elevator, before said doors or gratings are raised, removable metal guards, consisting of four metal posts, not less than three (3) feet in height, shall be inserted in sockets placed in the sidewalk at the four corners of such doors or gratings, with the tops of such posts connected by chains or bars, so that all sides of such openings shall be guarded, except that side next to curb, and the public protected from injury by the sudden raising of such doors. Such metal guards shall be removed as soon as said doors or gratings are closed.

It shall be unlawful for any person, firm or corporation operating or using sidewalk elevators to keep the doors or gratings thereof open or permit the same to remain open except during the time necessary for the receiving or shipping of merchandise or supplies and unless during said time the said doors or gratings remain open suitable guards or railings are provided around the opening of the sidewalk to prevent accidents to the public, and unless a lighted lamp shall be maintained at openings when the doors or gratings thereof are open after dark.

It shall be unlawful for any person, firm or corporation to construct, operate or use, or cause to be constructed, operated, or used, any trap-door or opening whatsoever in any sidewalk, unless the same be equipped with removable metal guards, consisting of four metal posts, not less than three (3) feet in height, and which metal posts shall be inserted in sockets placed in the sidewalks at the four corners of such trap-door or opening, with the tops of such posts connected by chains or bars, so that all sides of such openings shall be guarded. Such metal guards shall be removed as soon as said trap-doors or openings are closed.

It shall be unlawful for any person, firm or corporation, operating or using trap doors or other openings in sidewalks to keep the doors, openings or gratings thereof open or permit the same to remain open

except during the time necessary for the receiving or shipping of merchandise or supplies and unless during said time the said trap doors, openings or gratings remain open suitable guards or railings are provided around the opening of the sidewalk to prevent accidents to the public.

Any person, firm or corporation, violating any of the provisions of this Ordinance, shall be guilty of a misdemeanor, and, upon conviction, shall be punished by a fine not to exceed five hundred dollars, or by imprisonment in the County Jail for not exceeding six months, or by both such fine and imprisonment.—(Re-enacted by Ordinance No. 2189.)

### **Stairway and Elevator Enclosures in Basements.**

Section 239. The bottom of every elevator and of every stairway leading to a basement shall be enclosed with a door and a tight partition extending from the basement floor to the underside of the first floor, which enclosure shall be of the construction required for a building of the class in which it is placed, and shall contain no glass except wire glass one-quarter inch thick in metal sash.

### **Elevator Shafts and Hatchways.**

Section 240. Open elevators or elevators without fire-proof enclosures may be used in buildings of Classes "A" and "B." They may also be used in buildings of Class "C," provided they are located and operated in well holes of fireproof staircases (oak treads may be used); provided the staircases are entirely surrounded by walls, either of fireproof material or of studding covered on both sides with metal lath and plaster.

Open elevators may be used in all buildings provided they do not pass the ceiling of the first story.

Buildings occupied or used entirely for manufacturing or mercantile purposes may have open elevators with hanging enclosures around the openings at each floor, extending downward at least three feet and covered with metal on both sides from soffit of the hanging enclosures to the top of the floor above, and trap doors covered with metal on the underside at each floor.

Elevators, hoists, dumb waiters and lifts and all open-

ings or shafts passing through the floor or floors in all buildings other than Classes "A" and "B," and under all other conditions, shall be enclosed by walls of noncombustible material, or of studding covered on both sides with iron, or with metal lath and plastering not less than three-quarters of an inch in thickness.

If the shafts of said elevators, hoists, dumb waiters and lifts pass the upper floor of any building they shall be carried through at least 18 inches above the lowest point of the roof adjacent, and they must be covered with a skylight; where roofs slope at an angle exceeding 20 degrees, flat skylights parallel with roof shall be permitted, provided  $\frac{1}{4}$ -inch wired glass or protecting wire screens are used as provided in Sections 231 and 232 of this Ordinance.

If the shafts do not pass the upper floor their tops shall be covered with some noncombustible material.

All faces of doors opening into elevator shafts shall be of metal or covered with metal. The upper panel of any such door may be of wired glass  $\frac{1}{4}$  of an inch in thickness. Windows shall not exceed one for each floor, nor shall any window have a greater area than 24 square feet, except where said openings are in exterior walls and face a street, when they may by permission of the Board of Public Works be made larger. The frames, sashes and all woodwork shall be covered with metal, and sashes shall be glazed with wire glass  $\frac{1}{4}$  of an inch in thickness.

### **Barricades to be Erected During Construction.**

Section 241. During the construction or repair of buildings, as soon as the rough or temporary floor is laid, all shafts or openings, or wells, shall be provided with a railing four feet high around such openings, and in shafts where elevators or hoists are running a barricade at least six feet high shall be erected and maintained around such shafts.

### **Chimneys and Flues.**

Section 242. All chimneys and flues hereafter constructed, except as provided in Sections 244, 245 and 246 hereof referring to patent chimneys shall be of brick or stone or may be of concrete when in concrete walls;



their enclosing walls shall be not less than four (4) inches thick, and shall, if less than eight (8) inches thick, be lined on the inside with well-burnt clay or terra cotta pipe not less than  $\frac{3}{4}$  of an inch thick for flue linings of the following inside dimensions: 3x7 inches 3x11 $\frac{1}{2}$  inches, 7x7 inches and 7x11 $\frac{1}{2}$  inches, and one inch thick for flue linings of the following inside dimensions: 2 $\frac{1}{2}$ x15 inches, 6 $\frac{1}{2}$ x15 inches, 11x11 inches, 11x15 inches and 15x15 inches. Said lining shall start from the bottom of the flue or the throat of a fireplace, be continuous to the top of the flue, and shall be built in first and bricked around as carried up. Flues where lining is not required by this Ordinance shall have the joints struck smooth on the inside, and, if less than eight (8) inches thick, shall be smoothly plastered for the entire height on the outside.

No smoke flue shall be less than 7 by 7 inches in the clear, and such sized flue shall have but one inlet; for two inlets the flue shall be not less than 7 by 11 $\frac{1}{2}$  inches in the clear; for three inlets not less than 6 $\frac{1}{2}$  by 15 inches in the clear, and for a larger number of inlets the size shall be increased in same proportion. Flues larger than two hundred square inches and less than five hundred square inches area shall be surrounded by walls not less than eight inches thick; flues larger than five hundred and less than one thousand square inches area shall be surrounded by walls not less than twelve inches thick to a height of fifteen feet above the inlet, and eight inches thick the remaining height; flues larger than one thousand square inches shall be proportionately increased in size and shall be lined with fire brick for at least twenty feet above the inlet.

Bakery oven flues shall be not less than 12 by 12 inches in the clear and shall be surrounded by brick work not less than eight (8) inches thick.

The inside four inches of all boiler flues for boilers of over twenty-five horsepower shall be of firebrick, laid in fire mortar, for a distance of twenty-five feet in any direction from the source of heat.

Chimneys and stacks connected with steam boilers shall extend not less than ten feet above the woodwork of the roof, or any adjacent roof, and if sawdust, shav-



ings or wood are burned, shall extend twenty feet above such roofs and be provided with a spark arrester. Spark arresters shall be placed upon all chimneys and stacks whenever the Board of Public Works deems it necessary for the safety of property.

Chimneys and flues from boilers, restaurants and hotel ranges, bakers' ovens and similar unusually hot flues, shall have the outside exposed throughout the height of the room in which connection therewith is made, and if plastered shall be plastered directly upon the bricks.

All chimneys having a greater flue area than two hundred and sixty (260) square inches shall be carried up at least ten feet above the highest point of the roof of the building of which they form a part, and ten feet above the highest point of any roof within fifty feet of such chimney.

Where a smoke pipe is to enter a chimney or flue a tile thimble not less than  $\frac{5}{8}$  of an inch thick shall be placed as construction progresses. Thimbles shall be surrounded by four inches of brickwork brought out flush with furring and shall extend to the face of the plastering and not be nearer than six inches to any wood, lath and plaster. No tile pipe shall be used as a smokepipe in connection with such thimbles.

Chimneys not part of a wall shall not be built upon any floor or beam of wood, but shall be built from the ground up and shall not increase in size from the foundation. No chimney shall be corbelled out more than eight inches from a wall and corbelling shall consist of at least five courses of brick, but no corbelling shall be more than four inches in twelve-inch walls. Offsets for reducing the size of chimneys shall not be greater than one inch to each course.

Flues in party walls shall not extend within four inches of the center of the wall, and joint flues in party walls shall be separated across the wall by an eight-inch width of brickwork for the entire length.

No joist or girder shall be supported on the walls of any chimney or flue, and no woodwork shall be placed

nearer than two inches to the outside face of, or within seven inches of the inside of any smoke, air or other flue.

All wood joists shall be trimmed away at least two inches from any smoke, air or other flue; the trimmer beam shall not be less than eight inches from the inside of the flue, and four inches from the outside of a chimney breast; except that for smoke flues the brickwork of which is by this Ordinance required to be eight inches thick or more, the trimmer beam shall not be less than twelve inches from the inside of the flue.

Chimneys built outside of frame structures, or in light wells thereof, shall be well anchored, at intervals of not less than ten feet to the stud walls.

All chimneys and flues shall be properly cleaned and all rubbish removed and same left smooth on the inside on completion of the building.

### Fireplaces.

Section 243. All fireplaces and chimney breasts where mantels are placed, except as provided for patent chimney fireplaces, whether intended for ordinary fireplaces or not, shall have trimmer arches to support the hearth; arches shall be of brick, stone, burnt clay or concrete, at least twenty inches wide measured from the face of the chimney breast and their length shall not be less than the width of the chimney breast. Wood centers shall be removed from under trimmer arches and no timber shall be placed under any fireplaces or hearths. Hearths shall be of brick, tile or stone.

Fireplaces shall have arched heads with an iron arch bar over the top of the opening and not less than  $\frac{1}{4} \times 2\frac{1}{2}$  inches, turned up at the ends two inches in each side of a chimney breast, so as to make a perfect bond for arch.

All fireplace openings where furred with wood on face, shall be surrounded by a brick rim eight inches wide projecting four inches, bonded into the brickwork. The firebacks and jambs of all fireplaces shall not be less than eight inches thick, of solid masonry.

When a grate is set in a fireplace a lining of firebrick at least two inches thick shall be added to the fireback

unless soapstone, tile or cast iron is used, and filled solidly behind with fireproof material. No mantel or other woodwork shall be exposed back of a summer piece; the ironwork of the summer piece shall be placed against the brick or stonework of the fireplace. No fireplace shall be closed with a wooden fireboard.

Open fireplaces shall have arched heads, which shall, whenever possible, extend to the back of the tile or marble facing.

### Patent Chimneys.

Section 244. In lieu of the brick or stone chimney, as hereinbefore provided, there may be erected a chimney known as a Patent Chimney, for which a United States patent has been issued, and which has been approved by the Board of Public Works.

Every corporation, co-partnership or individual engaged in conducting the business of constructing, erecting, installing or repairing brick, stone or patent chimneys or fireplaces in the City and County of San Francisco, shall appear in person or by duly authorized representative, at the office of the Board of Public Works and shall register with the said Board of Public Works, the name and place of business in said City and County of said corporation, co-partnership or individual, and the person so appearing shall make and file with said Board of Public Works, his affidavit that such name and place of business, as thus registered are correctly stated. Upon filing of said affidavit said Board of Public Works shall forthwith issue to said corporation, co-partnership or individual a certificate of such registration, provided, that said certificate shall not be granted for more than the period of one fiscal year, or a portion thereof, in any case unexpired at the time of granting of the certificate. And no corporation, co-partnership or individual shall construct, install, erect or repair any patent chimney or fireplace connected with a patent chimney, unless such certificate of registration shall have first been issued to such corporation, co-partnership or individual.

No heater, stove or range wherein coal, gas or coal-oil or other fuel is consumed shall be used unless the

same be connected with a brick, stone or patent chimney, except as provided for in Section 247 of the Building Ordinance.

Upon the completion of the erection or repair of any brick, stone or patent chimney or fireplace connected with a patent chimney, it shall be the duty of the corporation, co-partnership or individual who performed said work to notify the Board of Public Works of such completion, who shall at once cause the same to be inspected, and if found in compliance with this Ordinance shall make and deliver a certificate or report of such inspection to the corporation, co-partnership or individual that performed said work, which certificate or report shall specify whether or not said work has been performed in compliance with the provisions of this Ordinance, and if not in compliance therewith shall state wherein said work does not comply with the provisions of this Ordinance. It shall be the duty of the Board of Public Works to keep on file in its office a duplicate of said certificate or report which shall at all times be subject and readily accessible to the inspection of the public.

No patent chimney or fireplace connected with a patent chimney hereafter constructed, altered or repaired shall be used until a certificate or report has been made and filed by said Board of Public Works as aforesaid, certifying that said work has been done in compliance with the provisions of this Ordinance, nor shall any building hereafter constructed, wherein patent chimneys or fireplaces connected with patent chimneys, shall have been installed be plastered until such certificate or report shall have been made and filed.

All patent chimneys shall be built up from the floor on which they are used, and in no case shall a stove pipe enter the bottom of a patent chimney, and when erected on the inside of a building they shall rest on an iron plate not less than one-quarter of an inch in thickness covered by not less than eight inches of brick work, and shall contain a smokeproof opening near the bottom for cleaning purposes. Patent chimneys built on the inside of a building shall have an opening in the

partition inclosing the chimney to permit the cleaning of same.

If a patent chimney be erected on the outside of a building, it shall rest on a substantial iron bracket, not less than  $\frac{1}{4}$  inch in thickness by  $1\frac{1}{4}$  inches in width, and fastened to a studding by two bolts, not less than 5-16 inch in thickness, and nuts, screws or lag screws shall not be allowed.

All patent chimneys shall be braced every five feet of their height by substantial iron bands securely fastened to the frame or studding or cross-pieces of the building; which said bands shall not be less than  $\frac{1}{8}$  inch in thickness by  $\frac{7}{8}$  inch in width and so constructed that chimney does not come within one inch of any woodwork. In no case shall any patent chimney be suspended from any roof timber or floor beam. All joints must be cemented together with cement mortar and the bands covering the joint shall be made of No. 24 gauge galvanized iron, and to be riveted with not less than two rivets, and space between bands and terra cotta pipe to be filled with cement mortar to make them smoke and spark proof. Each band to have not less than three No. 24 gauge, galvanized iron lugs riveted thereto.

The covering or casing of all patent chimneys shall be of No. 24 gauge, galvanized iron, riveted together at the lengthwise joint with rivets not more than three inches apart, or may be seamed, and top and bottom of seams secured by rivets, and shall be ventilated by six holes not less than one inch in diameter, made close to the top of chimney above roof, also six holes not less than one-half inch in diameter near inlet. The base or starting point of galvanized iron casing or covering of patent chimney from fireplace shall have not less than eight (8) holes of not less than  $\frac{3}{4}$  inch in diameter, not less than three (3) inches from bottom of said starting point. The casing or covering shall be at least two inches from the inside of terra cotta pipe.

Where chimney passes through the roof the flange or roof collar to be of such capacity as to allow the casing of the patent chimney to pass through said roof collar or flange and to fit snugly. A short and tapering casing



made to slip over outside casing of chimney and roof collar so that casing above roof will conform with size of casing or covering of chimney below roof collar.

No patent chimney shall be erected so that it will be less than one inch from all woodwork, and the openings in the roof and through each floor and ceiling through which it passes shall be closed around said chimney with an iron plate or other fireproof material.

All patent chimneys projecting through a pitch roof six (6) feet or more shall be braced with not less than one iron rod or gas pipe not less than  $\frac{5}{8}$  inch in diameter and said chimney to be also tied with not less than two guide wires to roof.

All pipe used for patent chimneys shall be composed of pure calcined clay not less than one inch in thickness.

No patent chimney shall have more than one inlet except that patent chimneys used or designed as vents, for gas stoves, gas ranges, or gas heaters may have one terra cotta inlet, not over four inches in diameter, for each floor, provided that the sizes for patent chimneys with which such inlets are connected shall be as follows:

Chimneys three stories or less in height shall not be less than six (6) inches in diameter.

Chimneys four stories in height shall not be less than seven (7) inches in diameter.

Chimneys five stories in height shall not be less than eight (8) inches in diameter.

Chimneys six stories in height shall not be less than ten (10) inches in diameter.

Chimneys seven stories or over in height shall not be less than twelve (12) inches in diameter.—(As amended by Ordinance No. 2914, N. S.)

Section 244-A. All patent chimneys shall be built up from the floor on which they are used, and in no case shall a stove pipe enter the bottom of a patent chimney, and when erected on the inside of a building they shall rest upon an iron plate not less than one-quarter of an inch in thickness, covered by not less than eight inches of brick work or concrete construction subject to approval of the Board of Public Works. Patent chimneys



built on the inside of a building shall have a smoke and fire proof opening near the bottom, extending through to the finished face of the wall or partition to permit the cleaning of the chimney. (Added by Ordinance 7872, App. Jan. 13, 1928.)

### **Inside Dimensions of Patent Chimneys.**

Section 245. The inside dimensions of patent chimneys shall be as follows:

For fireplaces not over 18 inches opening, 6 inches.

For fireplaces with openings in excess of 18 inches and not more than 21 inches, 7 inches.

For fireplaces with openings in excess of 21 inches and not more than 24 inches, 8 inches.

For fireplaces with openings in excess of 24 inches and not more than 30 inches, 10 inches.

For fireplaces with openings in excess of 30 inches and not more than 36 inches, 12 inches.

For fireplaces with openings in excess of 36 inches and not more than 48 inches, 12 inches.

For fireplaces with openings over 48 inches, 14 inches.

For ordinary stove flues, 6 inches.

For French range flues, 8 inches.

For furnace flues, not less than 8 inches.

No flues shall be smaller in diameter than the opening of the furnace with which it is connected.— (As amended by Ordinance No. 2914, N. S.)

### **Patent Fireplaces.**

Section 246. All fireplaces and all gas logs connected with patent chimneys must be set on an iron plate, not less than one-quarter of an inch in thickness and not less than three (3) feet nine (9) inches in length by three (3) feet in width, which shall be free from all holes, said iron plate in all cases shall extend at least eight inches under the back, jambs and hearth. Boards shall not be placed under the iron plate, which must rest on the floor joists. On top of the iron plate there shall be one (1) inch of concrete or cement mortar, then a course of brick, followed by the tiling or marble. The strength of the floor must not be impaired by the cutting out for the fire place. In lieu of resting on the

floor joists, said iron plate may be suspended by wrought iron stirrups of sufficient strength to sustain the fireplace and patent chimney.

The brick jambs of every fireplace or grate opening shall be at least eight (8) inches wide, and the backs shall not be less than eight (8) inches thick, and where fire places come over one another on separate floors, the jamb of the lower fireplace shall be wide enough to carry the patent chimney far enough to one side of the jamb above so that the patent chimney will pass the upper fireplace in as straight a line as possible. Where bends are necessary in patented chimneys solid offsets shall be used.

Fireplaces shall have arched heads with an iron arch bar over the top of the opening, and not less than  $\frac{1}{4} \times 2\frac{1}{2}$  inches, turned up at the ends two inches in each side of chimney breast, so as to make a perfect bond for arch.

All fireplace openings where furred with wood on face shall be surrounded by a brick rim eight inches wide projecting four inches, bonded into brick work. The firebacks and jambs of all fireplaces shall not be less than eight inches thick, of solid masonry.

When a grate is set in a fireplace a lining of firebrick at least two inches thick shall be added to the fireback unless soapstone, tile or cast iron is used, and filled solidly behind with fireproof material. No mantel or other woodwork shall be exposed back of a summer piece, the iron work of the summer piece shall be placed against the brick or stonework of the fireplace. No fireplace shall be closed with a wooden fireboard.

Open fireplaces shall have arched heads, which shall, whenever possible, extend to the back of the tile or marble facing. In no instance shall second-hand patent chimney material be used in the construction or erection of a patent chimney until the said material shall have been first inspected and approved by the Board of Public Works.

Every person, firm or corporation engaged in the business of erecting or installing patent chimneys in, on or about buildings or other structures in the City and County of San Francisco, shall pay a municipal license

of one hundred and twenty-five dollars per annum; or as an option and in lieu of the payment of said license as herein recited, there may be paid to the Board of Public Works an inspection fee in the sum of fifty cents for each and every flue to be erected or installed in any building or structure. The said inspection fee is to be payable to the Board of Public Works at the time of obtaining a permit for the erection or installing of such patent chimney.—(As amended by Ordinance No. 2914, N. S.)

### Electric Heaters.

Section 246A. The provisions of Sections Nos. 244, 245 and 246 regulating and requiring chimneys, vents or flues shall not apply to the installation or maintenance of electric heaters or any apparatus or appliance whereby electricity is used for heating purposes.—(Added by Ordinance No. 3494, N. S.)

### Smokestacks.

Section 247. Smokestacks shall be constructed of steel, brick, or reinforced concrete. If of steel the metal shall be not less than

1/8-inch thick for diameter up to 36 inches.

3-16-inch thick for diameter 36 inches up to 54 inches,

1/4-inch thick for diameter over 54 inches,

increasing towards the bottom as determined by the weight and lateral wind pressure. If of brick, they shall be laid up in cement mortar and shall be 13 inches thick for the upper 60 feet and increasing by four inches in thickness for each subsequent 60 feet in height, and have an external batter of 1 in 30. If of reinforced concrete, built as outlined under Class "B" buildings, the thickness shall be one-half that required for brick. All breeching shall be of at least 3-16 metal, lined with firebrick or covered with 85 per cent carbonate of magnesia 1½ inch sectional block covering.

In buildings of Class "C" and frame or wooden buildings, smokestacks of iron or steel may be used in connection with boilers and coffee roasters, provided same are not nearer than twenty inches to any woodwork where passing through floors, ceilings, roofs or partitions, and are protected with a metal jacket twelve

inches from the stack, extending above and not less than twelve inches below the joists and have some metal umbrella to cover the roof opening high enough above the same to permit a free vent. Any woodwork or enclosure of such stack within four feet thereof other than masonry or tile, shall be metal lathed and plastered or have equivalent protection. Such stacks on the outside of a building shall not be nearer than eighteen (18) inches to any unprotected woodwork or wood lath and plaster, or nearer than twelve inches to any woodwork or wood lath and plaster, protected with metal extending two feet on each side of such stack.

### Chimney of Cupolas.

Section 248. Steel cupola chimneys of foundries shall extend at least ten feet above the highest point of any roof within a radius of fifty feet thereof, unless such cupola be placed within an enclosure composed of fireproof materials extending at least ten feet above the top of the cupola, and all exterior openings of such structure covered by a suitable screen to prevent the egress of sparks. No woodwork shall be placed within two feet of the cupola.—(As amended by Ordinance No. 1747, N. S.)

### Height of Chimneys and Flues.

Section 249. All chimneys and flues shall extend at least four (4) feet above a flat roof and at least two (2) feet and six (6) inches above the ridge of a peaked roof, and if rising above the roof to height equal to more than six (6) times their thickness shall be properly anchored.

If the Board of Public Works deems any chimney unsafe to any adjoining or adjacent building, said chimney shall be carried up four feet above the extreme height of said building, and if an extension of iron pipe is deemed unsafe by said Board, such extension shall be of brick or terra cotta pipe.

The owner or occupant of any building shall cause the chimneys thereof to be swept as often as may be required to keep clean.

### **Smoke Pipes — Not Permitted — To be Removed — In Floors and Partitions.**

Section 250. No smoke pipe, stove pipe, terra cotta pipe, earthen pipe, or other smoke flue, except as provided in this Ordinance, shall project through any external wall or window, or through the roof, or any skylight of any building, and all the above named pipes of any building now erected and for which the United States patent has not been issued, must be removed within thirty (30) days after the passage of this Ordinance.

No smoke flue shall pass through any wooden partition of any building unless there is a ventilated air space at least four (4) inches around the pipe. Any smoke pipe passing through the floor or floors of any building shall be protected by a metal casing, extending from the ceiling to at least one (1) foot above the floor, and there shall be a ventilated air space of at least four (4) inches around the said pipe.

### **Gas Grates, Gas Logs and Other Gas or Electrically Heated Appliances.**

Section 251. (a) No gas grate, gas log, or other appliance using gas or electricity for producing heat except as otherwise ordained, shall be placed in a fireplace or recess unless such fireplace or recess be constructed as required in Sections 243 and 246 of this Ordinance for fireplaces, the sides, back and top of which shall be of brickwork not less than eight (8) inches thick; all pipes supplying gas thereto shall be of iron and enter only at the sides of fireplaces or recesses, through brickwork. Gas grates, gas logs, or other appliances using gas or electricity for producing heat, not placed in a fireplace or recess shall have a clear and unenclosed space of not less than ten (10) inches between them and any unprotected woodwork, wood lath and plaster or other combustible material, or a similar space of four (4) inches between them and any woodwork, wood lath and plaster, or other combustible material protected with terra cotta or tiles one inch thick or with metal with one (1) inch clear air space be-



tween the metal and woodwork, wood lath and plaster, or other combustible material.

No vent shall be permitted other than a brick or patent chimney constructed as required in Sections 242, 244, 245 and 246 of this Ordinance.

(b) No gas range, or gas water heater shall be placed nearer than twelve (12) inches to any unprotected woodwork, wood lath and plaster, or other combustible material or nearer than six (6) inches thereto if such woodwork, wood lath and plaster, or other combustible material is protected with metal with one (1) inch clear air space between the metal and the woodwork, wood lath and plaster or other combustible material. No gas range or gas water heater shall be placed in any recess unless the front of the recess is either open or freely vented at top and bottom.

(c) Every instantaneous gas water heater shall be provided with a vent pipe not less than three (3) inches in diameter, extending clear through and at least twelve (12) inches above the roof, with a "T" connection at the top; and around every such vent at all places not exposed there shall be a galvanized iron sleeve extending the full length of the concealed portion with a clear air space of not less than one (1) inch surrounding the vent. In every room fitted with an instantaneous gas water heater there shall be provided an air inlet independent of doors or windows.

(d) All low, portable gas stoves, gas plates, or heaters, shall be placed on iron stands or other incombustible bases, or the burners shall be at least six (6) inches above the base of the stove and metal guard plates placed four (4) inches below the burners; all woodwork under them shall be covered with metal or other incombustible material. All portable gas heated stoves, ranges, kettles, gas plates or other gas heated devices, shall be connected direct to their gas supply main only by iron pipe or flexible metal tubing. Also see Ord. No. 11.83, app. June 13, 1932.

### **Portable Steam or Hot Water Radiators Wherein Gas or Electricity is Used for Producing Heat.**

Section 252. (a) Portable steam or hot water radiators wherein gas or electricity is used for producing



heat, when installed in a fireplace or recess in any building, shall be installed as required for gas grates or gas logs in Subdivision "A" of Section 251 of this Ordinance.

(b) Portable steam or hot water radiators wherein gas or electricity is used for producing heat, when not installed in a fireplace or recess, shall have a brick wall of not less than eight (8) inches thick behind and extending at least eight (8) inches above and on each side of them, and between them and any woodwork, wood lath and plaster or other combustible material, and shall have under them a hearth of tile and cement not less than two (2) inches thick; or shall have a clear and unenclosed air space of not less than four (4) inches between them and any woodwork, wood lath and plaster or other combustible material, protected by metal, with one (1) inch clear air space between the metal and the woodwork, wood lath and plaster or other combustible material; or shall have a clear and unenclosed air space of not less than eight (8) inches between them and any woodwork, wood lath and plaster or other combustible material not so protected, and shall have under them a hearth of tile and cement not less than two (2) inches thick.

(c) All steam or hot water radiators shall be of cast metal and shall stand a hydraulic pressure of at least one hundred (100) pounds to the square inch, and shall be equipped with an automatic safety valve of a standard pattern, approved by the Fire Marshal, and set to blow off at twenty (20) pounds pressure or less.

(d) Gas grates, gas logs, hot air furnaces or heaters, or other appliances wherein gas or electricity is used for producing heat, when provided with a double back of metal with air space between of at least one and one-half ( $1\frac{1}{2}$ ) inches and connected with conduit of at least three (3) inches in diameter from external atmosphere, whereby air may have a free and uninterrupted passage from the outside of house to burner to support combustion, and through said air space and into room, may be installed without a flue, chimney or other vent as follows:

Each said grate, log, furnace, heater or other appli-

ance shall have a brick wall not less than eight (8) inches thick behind and extending at least eight (8) inches above and on each side and between it and any woodwork, wood lath, plaster or other combustible material, or shall have a clear and unenclosed space of not less than four (4) inches between it and any woodwork, wood lath, plaster or other combustible material, protected by metal with one (1) inch clear space between the metal and the woodwork, wood lath, plaster or other combustible material, or shall have a clear and unenclosed space of not less than six (6) inches between it and any woodwork, wood lath, plaster or other combustible material not so protected, and shall have under it a hearth of tile, cement or other noncombustible material, or shall be supported on legs of a noncombustible material, provided that there shall be a clear space between it and the floor or ground of five (5) inches.—(As amended by Ordinance No. 1401, N. S.)

Also see Ord. 11.83, app. June 13, 1932.

### GAS GRATES

Section 252A. Gas grates or gas logs shall not be placed in any building elsewhere than in a fireplace constructed as described in this Ordinance or in a recess constructed with not less than four-inch back, breasts, top and bottom of solid masonry. If placed in a fireplace they shall be connected to a brick or terra cotta chimney. If placed in a recess they shall be vented with a terra cotta vent as prescribed in this Ordinance or connected to a chimney. And it is further provided that any gas appliance other than a gas grate or gas log recessed in or attached to the wall or partition of any building or room, where such gas appliance is intended to be used for heating the building or room, shall be installed as provided for gas logs or gas grates. Except that in the case of gas appliances used for heating the building or room, if the flame is enclosed in a cast iron box in lieu of the masonry backing required in this section a ventilating space of not less than 1 inch in thickness may be used. Such ventilated air space shall be built of No. 24 galvanized iron and set not less than 1 inch from all woodwork.

And further provided in the case of heating appliances which use an illuminating flame and are directly connected with the outside air by not less than a 3-inch air intake the cast iron fire box and vent herein required may be omitted. And it is absolutely prohibited to use any type of Bunsen flame in any heating appliance except as hereinbefore provided.

The use of gas burners, gas registers, auxiliary gas heaters when located in the floor of any building or room or outside the fire pot of any heating furnace when used for heating any building or room are hereby prohibited if the products of combustion are allowed to escape into the room except where an illuminating flame is used. All such heating devices shall be installed as provided for gas grates.

No gas water heater or gas water boiler shall be placed in any recess unless the front of the recess is either open or freely vented at the top and bottom; such recess shall be completely lined with metal lath and plaster or asbestos covered with galvanized iron and shall have not less than six (6) inches clearance all around said heater. In every room provided with gas appliances there shall be provided an air inlet independent of doors and windows.—(Added by Ordinance No. 4147.)

Section 252B. The provisions of Sections Nos. 244, 245 and 256 regulating and requiring chimneys, vents and flues shall not apply to the installation or maintenance of gas heat radiators, standing on the floor not less than five inches from any wooden or plaster wall.

All gas heat radiators shall be connected to a brick or patent chimney or to a terra cotta flue of not less than 6 square inches in the clear, the walls of such flues to be not less than  $\frac{1}{2}$  inch in thickness and the joints to be made of galvanized iron sleeve not less than three inches wide with edges flanged outward at least  $\frac{1}{2}$  inch and the joints to be filled with cement; the entire flue encased in galvanized iron similar to the so-called patent flue with  $\frac{1}{2}$ -inch air space all around between terra cotta and casing. This patent

flue to be so sized that not less than six square inches in the clear will be permitted for four radiators or less, and in cases where more than four radiators are to be connected into the same flue the area is to be increased proportionally, said patent flue in all cases to extend to the outside and at least two feet above the roof of the building. Every gas heater of the radiator type shall be connected to the gas supply by iron pipe; the burner of said radiator shall be of the bunsen or atmospheric type; the radiator shall be made of cast iron, and when installed in any building shall not be closer than five inches to any wall or partition, and shall be connected to a flue, vent pipe or chimney of such size and material as is provided for herein, excepting where said radiator is so designed and constructed as to have a firebox or burner chamber containing the burner where combustion takes place, and also, having one or more super-heating chambers or secondary combustion chambers attached to or substantially surrounding said firebox containing said burner, and also having at the back of said radiator a retort for the purpose of purifying and humidifying the products of combustion before entering the room, said retort being attached to or made a part of said firebox and said super-heating or secondary combustion chambers.

Every gas heater of the fireplace or mantle type, having a bunsen or atmospheric burner, shall only be connected to the gas supply by iron pipe.

No gas heater of the portable stove type shall contain or be operated with bunsen or atmospheric burner, or be connected to the gas supply by flexible metal or rubber tubing, unless the stopcock is provided and placed back of said tubing at the point of the gas supply outlet.—(Added by Ordinance No. 4354, N. S., and amended by Ordinance No. 5423, N. S.)

Also see Ord. 11.83, app. June 13, 1932.

### Masonry Enclosures for Heating Apparatus

Section 253. From and after the passage of this section as herein amended, all steam boilers, heating furnaces and water heating apparatus using any fuel

other than gas, shall be enclosed in a room with walls constructed of masonry, terra cotta or tile from the floor to the bottom of the floor joists above; the ceiling shall be of the same construction, or of not less than one (1) inch plaster on metal lath. All swinging doors shall be arranged to swing out and to close automatically. Sliding doors shall overlap the wall at least four (4) inches at sides and top. Sills shall be of metal or masonry. Floor shall be of concrete. Where oil is burned for fuel, every doorway shall have a brick or concrete sill rising not less than seven (7) inches from the floor. All doors shall be covered on both sides with galvanized iron. All windows shall be of wired glass not less than one-quarter ( $\frac{1}{4}$ ) inch thick set in metal frames or wood frames covered with galvanized iron.—(Amended by Ordinance No. 4411.)

Section 253A. All flues from any steam boiler, heating furnace or water heating apparatus using fuel oil shall have an inside lining of fire brick to the level of the second story floor and from second story floor upward may be of terra cotta. All such flues shall have but one inlet.

All heater rooms shall be vented to the outer air by galvanized iron duct, 12"x12," or a window to the outer air.

All steam boilers, heating furnaces and heating apparatus rooms shall have at least three feet clearance between said boiler, heating furnace or heating apparatus and inner face of said enclosing wall.—(Added by Ordinance No. 6301.)

### Erection of Steam Boilers, Furnaces, Etc.

Section 254. Boilers exceeding 10 H. P., used for generating steam for heating or motive power, and large furnaces, shall not be placed on any floor above the cellar of any building, unless the same are set on metal beams and arches and such beams shall be built into the walls. Every steam boiler shall be provided with a tank or other receptacle of sufficient capacity to hold at least a sufficient supply of water to last six (6) hours.

Whenever steam boilers, water heaters, large cooking ranges, furnaces, candy kettles, laundry stoves set in



brick, or other structures in which fire is maintained, are set on any wooden floor, such floor shall be protected by a continuous sheet metal bearing plate not less than 3-16 of an inch thick, all joints of which shall be securely rivited, and the top of such plate shall be covered with not less than seven (7) inches of brick or concrete. Also see Boiler Ordinance 11.086.

### Heating Furnaces.

Section 255. The top of all heating furnaces set in brick shall be covered with brick supported by iron bars, so constructed as to be perfectly tight; said covering shall be in addition to and not less than six (6) inches from the ordinary covering of the hot air chamber. Smoke pipes and furnaces not set in brick shall be at least two feet from any unprotected woodwork. If said smoke pipes and furnaces are less than two feet from any woodwork, said woodwork must be protected by sheets of tin plate in such manner that an air space of at least two inches will be formed between the woodwork and the tin plate, which shall extend one (1) foot beyond the furnace on all sides.

### Ranges and Stoves.

Section 256. The backs of all ranges, candy furnaces and kettles, if set in brick and built against any frame partitions or frame wall, shall be not less than eight (8) inches thick, and shall be extended with brick or hollow tile not less than two (2) inches thick to a height of two (2) feet above the top of furnaces or kettles. In no case shall any range, candy furnace or kettle set in brick against a brick wall, with any combustible material between it and the wall, or upon said wall for a height of two (2) feet above the top of such range, candy furnace or kettle.

All wood and lath and plaster, or wooden ceilings over all ranges in hotels, restaurants and boarding houses shall be guarded by metal hoods, placed at least nine (9) inches below the ceiling, or shall be metal lined on walls and ceiling back of and above the range. All ventilating pipes connected with the hood over a range shall be at least nine (9) inches from any wood lath



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and plaster, or combustible material, or such pipes shall be covered with one (1) inch of asbestos on wire mesh, and shall not pass through any floor. Stoves shall be kept twenty (20) inches and smoke pipes twelve (12) inches from any wood lath and plaster, or woodwork, and shall be protected with a metal shield arranged with at least one (1) inch air space behind such shield

### Hot Air Boxes.

Section 257. All hot air boxes hereafter placed in the floors or partitions of buildings, except when such are entirely of incombustible material, shall be made of double pipes of tin plate, which shall not be less than one-half inch apart and set in soapstone or equally fireproof borders, not less than two (2) inches in width,

to which the pipes shall be tightly jointed by inserting the same into a groove, or the pipes and boxes shall be covered with asbestos one-sixteenth (1-16) of an inch in thickness cemented thereon.

Hot air boxes of pipes less than ten (10) inches by twelve (12) inches in size shall be kept at least half ( $\frac{1}{2}$ ) an inch from any woodwork; those of greater size shall be kept at least one (1) inch from any woodwork. No woodwork shall be placed within one (1) inch of any metal pipe intended to convey steam or heated air, unless such pipe is protected by a facing of metal, soapstone or earthen ring; provided, that no covering, except it be of incombustible material, shall be placed within one (1) inch of the outer surface of any steam pipe.

Ventilating ducts for cold air may be made of galvanized iron, provided they are entirely enclosed with partitions constructed as required in the different classes of buildings. When said ducts pass through roof they shall have protecting hoods to keep out rain.

### Registers.

Section 258. Registers located over a brick furnace shall be supported by a brick shaft, built up from the cover of the hot air chamber; said shaft shall be lined with metal pipe and all wood beams shall be trimmed away not less than four (4) inches from it. Where a register is placed on any woodwork in connection with a metal pipe or duct, the end of said pipe or duct shall be flanged over on the woodwork only, under it. All registers for hot air furnaces placed in any woodwork or combustible floor shall have stone or iron borders, firmly set in plaster of Paris, or gauged mortar. All register boxes shall be made of tin plate or galvanized iron, with a flange on top to fit the groove in the frame, and the register must rest upon the same. There shall be an open space of two (2) inches on all sides of the register box, extending from the under side of the border through the ceiling below. The said opening shall be fitted with a tight tin, or galvanized iron casing, the upper end of which shall be turned under the frame. When a register box is placed in the floor, over a port-

able furnace, the open space on all sides of the register box shall not be less than three (3) inches. When only one (1) register is connected with a furnace, said register shall have no valve.

### **Steam and Hot Water Heating Pipes.**

Section 259. Steam or hot water heating pipes shall not be placed within two (2) inches of any timber or woodwork, unless the timber is protected by a metal shield, when the distance shall not be less than one (1) inch. All steam or hot water heating pipes, passing through floors and ceilings or lath and plaster partitions, shall be protected by a metal tube one (1) inch larger in diameter than the pipe, having a metal cap at the floor and where they run in a horizontal direction between the floor and ceiling a metal shield shall be placed on the under side of the floor over them, and on the sides of beams running parallel with said pipe.

All wood boxes or casings enclosing steam or hot water heating pipes, and all wood covers to recesses in walls, in which steam or hot water heating pipes are placed, shall be lined with metal. All pipes or ducts used to convey air warmed by steam or hot water shall be made of metal or other fireproof material. All steam and hot water pipe coverings shall consist of fireproof materials only.

### **Drying Rooms.**

Section 260. Dry rooms, dry boxes and all enclosures used for drying by artificial heat, must be plastered upon metal lathing and have the floor of bottom covered with incombustible material or in lieu thereof may be lined throughout with tin and asbestos not less than  $\frac{1}{8}$  inch in thickness, or other approved incombustible material. If such dry rooms, dry boxes or enclosures used for drying contain steam or other heated pipes stoves or other heaters so arranged as to permit inflammable material to come in contact therewith, a metal netting of sufficient fineness must be so placed as to prevent such contact.

### **Notice as to Heating Apparatus.**

Section 261. In cases where hot water, steam, hot air or other heating plants are to be hereafter placed in

any building, or flues or fireplaces are to be changed or enlarged, due notice shall first be given to the Board of Public Works by the person or persons placing the said plants, in said buildings, or by the contractor or superintendent of said work.

### **Inside or Wet Standpipes for Hose Reels.**

Section 264. In every building exceeding 58 feet in height, and not over 124 feet, there shall be a vertical standpipe not less than 3 inches interior diameter. In every building exceeding 124 feet in height there shall be a vertical standpipe not less than 4 inches interior diameter. Such standpipes shall be located in halls near stairways, or near stairways if building has no halls, and shall be of wrought iron or steel, and together with fittings and connection shall be galvanized, and shall be of such strength as to safely withstand at least 300 pounds square inch water pressure when ready for service.

In buildings exceeding 100 feet frontage on two or more streets, or whose area exceeds 10,000 square feet there shall be two such standpipes, near separate stairways, if possible.

Said "Inside or Wet Standpipes for Hose Reels" shall be additional to the Fire Department standpipes required by Section 262 of this Ordinance. They shall be connected to water mains, tanks or pumps as hereinafter provided, with pressure on at all times; and if connected to a tank capable of holding 5,000 or more gallons of water, shall have an extension of equal diameter leading to a point outside of the building or premises designated by the Chief of Fire Department, and provided with a three-inch gate valve with a cap and chain. (See Ordinance No. 223.)

Standpipes shall extend from the cellar to and through the roof, with a hose connection located from 3 feet 6 inches to 6 feet above the floor level, fitted with approved straightway composition gate valve in each

story, including cellar, and a hose connection provided above the roof with the valve controlling latter located in the standpipe under roof and arranged to be operated both from above and below roof. A suitable three-quarter inch drain pipe and valve shall be provided under the roof for each roof connection.

### Fire Department or Dry Standpipes.

Section 262. Every building of four (4) or more stories in height shall have, inside or outside of its exterior walls (if over 16 stories standpipes must be inside), one or more metal standpipes, which shall extend from four (4) feet above the sidewalk to and over the roof and rest on the firewalls. Every standpipe shall have a Siamese inlet attached four (4) feet above the sidewalk, branches at each story, and a Siamese outlet on the roof. All inlets, branches and outlets to be of not less than three (3) inches interior diameter and to have caps and chains, and all branches and outlets to have three (3) inch gate valves. Standpipes shall conform to the following table:

	Interior Diameter.	Sidewalk Inlets.	Roof Outlets.
4-story building .....	4 inches	2-way Siamese	2-way Siamese
5-story building .....	4 inches	3-way Siamese	3-way Siamese
6 to 15-story buildings .....	5 inches	4-way Siamese	3-way Siamese
16 or more story buildings..	6 inches	6-way Siamese	4-way Siamese

All iron or steel material used in the construction and erection of standpipes shall be galvanized after being fitted to, and before being permanently placed in, the building, and shall be kept in good order and repair and free from obstructions. Standpipes shall be of such strength as will withstand a pressure of 300 pounds per square inch.

## Standpipes and Fire Escapes: Location and Inspection of.

Section 263. The Board of Public Works and Fire Wardens are hereby given the power to locate and inspect said standpipes and fire escapes, to see that same are properly constructed and located as in this Ordinance prescribed, and the Fire Warden shall furnish the owner a certificate when the work is satisfactory.

When more than one such standpipe is required in a building, they shall be connected at their bases by pipes of size equal to that of largest standpipe so that water from any source will supply all the standpipes.—(As amended by Ordinance No. 6287, N. S.)

### Water Supplies

Section 265. In buildings not exceeding one hundred and twenty-four (124) feet in height, the water supply to wet standpipes shall be from city water where pressure is sufficient to maintain twenty-five (25) pounds' pressure at highest hose outlet; from an automatic fire pump approved by the Board of Public Works and the Chief of the Fire Department, drafting from a supply approved by the Chief of the Fire Department or a steel pressure tank and equipment constructed as per specifications of the National Board of Fire Underwriters sprinkler tank with the following capacities:

Ground floor area of buildings	Net water capacity of tank.
Over 4000 square feet .....	5000 gal.
3000 to 4000 square feet .....	3000 gal.
2000 to 3000 square feet .....	2500 gal.
Less than 2000 square feet .....	2000 gal.

In buildings exceeding one hundred and twenty-four (124) feet in height, the water supply to wet standpipes shall be from an automatic fire pump approved by the Board of Public Works and the Chief of the Fire Department drafting from a supply approved by the Chief of the Fire Department. When a wet standpipe is connected to a tank there shall be a straightway



# Standpipe Fittings

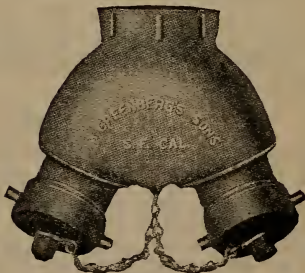
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check valve in a horizontal section of pipe between the first hose outlet in connecting pipe and tank, and said tank must be filled by a separate pipe and not through the standpipe.

Where an elevated gravity tank is used for a domestic purpose, and as a supply for an automatic fire pump, the pipe supplying domestic services shall be taken from above the center of the side of tank.

Provided, however, that when in the judgment of the Board of Public Works and Chief Engineer of the Fire Department, buildings used exclusively as hotels and apartment houses of Class A or B construction of limited area where all parts of the floor can be reached with fifty (50) feet of hose from one standpipe, the water supply to wet standpipes may be from a gravity tank the bottom of which is elevated not less than thirty (30) feet above the roof of the building, the capacity of the tank to be the same as that required for pressure tanks.—(As amended by Ordinance No. 6288, N. S.)

### Tanks.

Section 266. Tanks containing more than five hundred (500) gallons of water or other fluid placed on the roof or above the roof of any Class A, B or C building shall be supported on iron or steel beams of sufficient strength to safely carry the same, and the beams shall rest at both their ends on brick walls, or on iron or steel girders or iron or steel columns fireproofed as in Class A buildings, or piers of masonry. Underneath such tanks or on the side near the bottom thereof, shall be a short pipe or outlet, not less than four (4) inches in diameter, fitted with a suitable valve having a lever or wheel handle to same, so that firemen or others can readily discharge the weight of the fluid contents from the tank in case of necessity.

Covers on top of water tanks placed on roofs, if of wood, shall be covered with metal.

Tank towers erected within the fire limits shall be constructed entirely of non-combustible materials.

### **Location of Pumps and Boilers; Hose.**

Section 267. Where pumps constitute a supply to wet standpipes are located in the lowest story of a building they shall be placed not less than two feet above the floor level, and boilers upon which pumps depend for steam shall be arranged so that flooding of fires under same will be impossible.

Hose sufficient to reach all parts of the floor shall be attached to each wet standpipe outlet in the building, and hose for roof hydrant may be placed on rack on top floor near the scuttle leading to the roof. Hose shall be 1½ inches inside diameter, in 50-foot lengths, and provided with standard couplings (with lugs) at each end, all couplings to be of same hose thread as that in use by the Fire Department.

Hose shall be approved cotton rubber-lined made under specifications recommended by the National Board of Fire Underwriters.

Each line of hose shall be provided with washers at both ends and be fitted with play pipe or nozzle of Underwriter pattern, having handles at the base and with discharge outlet not less than five-eighths of an inch in diameter. One spanner shall be located at each hose connection throughout the building.

### **Elevator Service.**

Section 268. In every building exceeding one hundred feet in height at least one passenger elevator shall be kept in readiness for immediate use by the Fire Department during all hours of the day and night, including holidays and Sundays.

### **Auxiliary Fire Appliances.**

Section 269. All existing buildings and those hereafter erected exceeding one hundred feet in height shall be provided with such auxiliary fire apparatus and appliances as wrenches, spanners, fire extinguishers, hooks, axes and pails as may be required by the Chief of the Fire Department; all of said apparatus to conform in design to those in use by the Fire Department.

Sections 270 to 281, inclusive, repealed by Ordinance 2350 (New Series).

### **Sidewalks and Fences.**

Section 282. It shall be unlawful for any person, firm or corporation to erect or cause to be erected, or to continue the erection of any building within the fire limits, or to cover the same with mastic or other coating of mortar, without first laying or causing to be laid, on half of the width of the sidewalk, a temporary or permanent sidewalk for the use of pedestrians, and without first erecting or causing to be erected a good and substantial fence, at least ten (10) feet high, inclosing the sidewalk, so as to protect pedestrians from brick, timber, mortar or debris falling from such building. Such sidewalk must be so constructed, and all building operations must be so conducted that pedestrians shall have a free and unobstructed passage over at least the one-half of the official width of the sidewalk. No temporary sidewalk raised above or built beneath the official sidewalk grade shall be maintained or permitted to stand for a greater period than thirty (30) days from the date of the granting of the permit.

### **Protection of Pedestrians.**

Section 283. Whenever buildings shall be erected or increased to over two stories in height, upon or along any street, the owner, builder, or contractor constructing or repairing such building, shall have erected and maintained during such construction or repair a shed which shall extend over one-half of the sidewalk, which shed must be properly, strongly and tightly constructed so as to protect pedestrians and others using such streets. Whenever outside scaffolds are required to carry on the construction of buildings over eighty-six feet in height, whether the same be constructed by poles or thrust-out scaffold, there shall be erected on its outer edge and ends an enclosure of wire netting of not over one-inch mesh, or of boards not less than three-fourths of an inch thick, placed not over one inch apart, well secured to uprights not less than two inches by four inches, fastened to planks or timbers, and resting on put-logs or thrust-outs. The said enclosure shall be carried up at least five feet above the level on which the workmen employed on said scaffold are working.

The said thrust-outs shall be not less than three by ten spruce or pine, and shall be doubled or tripled as may be required for the load to be carried, and they must be thoroughly braced and secured; or said timbers may be in one stick, if proportioned to the load. The flooring on thrust-outs and put-logs shall be tightly constructed with plank. If the walls of such buildings are carried up to two stories or more above the roofs of adjoining buildings proper means shall be provided and used for the protection of skylights and roofs of such adjoining buildings.

The protection over skylights shall be of stout wire netting, not over three-fourths inch mesh, properly secured on stout timbers. All such sheds and enclosures shall be subject to the inspection of the Board of Public Works. Should the owners, tenants or lessee of said adjoining building refuse to grant permission to have said roofs and skylights so protected, such refusal shall relieve the owner of the building in course of construction of any responsibility for damage done to the persons or property on or within the premises affected.—  
(Amended by Ordinance No. 2614, N. S.)

### Temporary Floors.

Section 284. Temporary floors. (a) Any building more than two stories high in the course of construction shall have the joists, beams or girders of each and every floor below the floor or level where any work is being done, or about to be done, covered with flooring laid close together, or with such other suitable material to protect workmen engaged in such building from falling through joists or girders, and from falling planks, bricks, rivets, tools or any other substance whereby life and limb are endangered.

(b) Such flooring shall not be removed until the same is replaced by the permanent flooring in such building.

(c) It shall be the duty of the general contractor having charge of the erection of such building to provide for the flooring as herein required, or to make such arrangements as may be necessary with sub-contractors in order that the provisions of this Ordinance may be carried out.



(d) It shall be the duty of the owner or the agent of the owner of such building to see that the general contractor or sub-contractor carry out the provisions of this Ordinance.

(e) Should the general contractor or sub-contractors of such building fail to provide for the flooring of such building, as herein provided, then it shall be the duty of the owner or the agent of the owner of such building to see that the provisions of this Ordinance are carried out.

### **Permit for Scaffolds.**

Section 285. It shall be unlawful for any person, firm or corporation to erect, build or maintain, or cause to be erected, built or maintained, over or upon any building, any scaffolding without first obtaining the written permission of the Board of Public Works, which permit shall state fully for what purpose said scaffolding is to be erected and used, and such scaffolding shall not be used for any purpose other than that designated in such permit. A general permit for the construction of a building shall carry with it the right to construct scaffolds.

### **Safety of Scaffolds.**

Section 286. It shall be unlawful for any person, firm or corporation to erect, maintain, suspend, swing or use or cause to be erected, maintained, suspended, swung or used, any scaffold or staging, unless the same be of sufficient strength to support the weight placed thereon and of sufficient width to prevent any person working thereon or any materials placed thereon from falling.

It shall be unlawful for any person, firm or corporation to swing or suspend or cause to be swung or suspended, from any overhead support or supports, any staging or scaffolding, more than twenty (20) feet above the ground or floor, unless the same shall have when in use a safety rail, rising at least thirty-four (34) inches above the level, and extending along the outer edge and across the ends of such staging or scaffolding, and unless the same shall be provided with braces sufficient to sustain the weight of a man's body, and to prevent



said staging or scaffolding from swaying from the building or structure from which it is suspended.

### **Temporary Staging on Roofs.**

Section 287. No temporary staging of any kind nor stand for observation purposes shall be constructed of wood upon the roof of any building.

### **Preparation of Mortar or Concrete—Where Prohibited.**

Section 288. It shall be unlawful for any person, firm or corporation to place or cause to be placed or maintain or cause to be maintained anywhere upon the surface of the roadway of any public street in this city and county paved with either bituminous rock, asphalt, or brick, or upon the surface of any improved sidewalk therein, either any lime, mortar or any concrete in a moist state, for any purpose whatsoever, or to mix or prepare the same upon such roadway or such sidewalk, unless such mortar or such concrete be placed, mixed or prepared in a tight box or upon a close-fitted platform or bed constructed and maintained to the satisfaction of the Board of Public Works.

The provisions of this section, however, shall not be applicable to the placing, maintaining, mixing or preparing of concrete upon the roadway of a public street, intended solely for use in necessary street work, provided that the same be not maintained thereon for a period of time exceeding forty-eight hours, under such regulations as the Board of Public Works may prescribe, and, further provided, that all debris, dirt or other material resulting from or produced by such use be completely removed from such roadway thereafter.

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### NUMBERING OF BUILDINGS.

#### WHEN COMPLETED TO BE NUMBERED.

Section 289. Every person, firm or corporation or agent thereof, receiving permission to construct a new building, must obtain the official number or numbers for the same at the time the permit is issued. Such number or numbers to be placed or caused to be placed on the front of such buildings, adjacent to the vestibule used as an entrance, in such manner as to be readily and clearly seen from the street. Such number to be placed to the satisfaction of the Department of Public Works. As amended by Ord. 11.085, app. June 14, 1932.

#### ENTRANCES TO BE NUMBERED

Section 290. All entrances from street to buildings, or to separate apartments in buildings shall be numbered as herein specified, and it shall be unlawful for any person, whether owner or occupant of the building or any apartment therein, to place, maintain or allow to remain thereon any number other than the one required by this ordinance. The number on the front adjacent to the vestibule shall be of a different color from the background upon which it is placed, and each figure of such number shall be at least four (4) inches in length and of proportionate width.

All numbers must be made of substantial and permanent material and must be so affixed as not to be easily effaced or removed. The fees to be charged by the Board of Public Works for designating the proper number as required by the ordinance are as follows:

Apartment Houses	....\$4.00	Garages	..... 4.00
Residences, cottages, dwellings	2.00	Warehouses	.... 4.00
All other buildings	..... 4.00		

to be paid before any number is issued by the department (as amended by Ordinance No. 5136) (New Series) and 5447 (New Series). (As amended by Ordinance 7629, app. Aug. 19, 1927). Fees amended by Ord. 3.0418, app. July 18, 1932.

#### Method of Numbering.

Section 291. Market Street shall be the starting point for the numbers of all buildings fronting on the

streets beginning thereat and running therefrom in **any** direction. On Webster, Fillmore, Steiner, Pierce, Scott, Divisadero, Broderick, Baker and Lyon Streets and **Central Avenue** and streets in the Sunnyside, Lakeview, Railroad Homestead and City Land Association tracts, the numbering shall begin at their southerly ends and proceed toward the north. On all streets having a northerly and southerly course, or diverging less than forty-five (45) degrees from a northerly and southerly course, and not otherwise provided for, the numbering shall begin at their northerly ends and proceed toward the south. On all streets except as hereinafter provided having an easterly and westerly course, or diverging less than forty-five (45) degrees from an easterly and westerly course, the numbering shall begin at their easterly ends and proceed toward the west. **Provided**, that on streets lying south of Army Street and running from Mission in an easterly or southerly direction, and also on Bernal Avenue, Montezuma and Aztec Streets, Esmeralda Avenue and on streets in Gift Maps 1 and 2. the numbering shall start at their westerly ends and proceed toward the east. On all intermediate or subdivision streets the numbering shall commence where the streets begin and proceed in the same direction as the numbering on the principal streets between which they lie.

Section 292. On all streets the numbers on the right hand side, starting from the point of beginning, shall be even numbers, and the numbers on the left hand side shall be odd numbers; **provided**, that on all streets lying west of Central Avenue and Presidio Avenue, but not including the former, and having a northerly and southerly course, the numbers on the right hands side, starting from the point of beginning, shall be odd numbers and the numbers on the left hand side shall be even numbers.

Section 293. One hundred numbers or as many thereof as may be necessary, shall be allotted to the property frontage in each block between two main streets, the number 100 being the first number on the right hand side, and the number 101 being the first number on the left hand side of the second block of all streets, except those lying west of Central Avenue and Presidio Avenue,

but not including the former. The succeeding hundreds shall be allotted in similar manner consecutively to each succeeding block; **provided, however,** that on Mission, Natoma, Howard, Folsom, Harrison, Bryant, Jackson, Pacific, Broadway, Vallejo, Green, Union, Francisco, Bay and Webster Streets and on Central Avenue one hundred numbers shall be allotted to the first two blocks. One hundred numbers shall also be allotted on Divisadero Street between Waller and Page Streets. It is further provided that when the length of a block exceeds 850 feet except on Market Street, two hundred numbers shall be allotted to such block.

For the purpose of preserving uniformity in the numbering along Market Street, so that the numbers on both sides of said street shall conform as nearly as possible fifty even numbers shall be allotted to each of the following apportionments of frontage along the northerly side of Market Street: Between the westerly line of Spear Street produced northerly and easterly line of Drumm Street, between Battery and Montgomery Streets, between Kearny and Stockton Streets, between Powell and Taylor Streets, and between Jones Street and Marshall Square.

Fifty odd numbers shall be allotted to each of the following apportionments of frontage along the southerly side of Market street: Between East and Spear Streets, between Twelfth and Valencia Streets, between Guerrero and Dolores Streets, between Dolores and Church Streets, and between Church and Divisadero Streets.

When any street fails in its course to traverse certain blocks one hundred numbers shall be allotted to each block not traversed in the same manner as if the street were continuous. When any street is intersected on its opposite sides by different streets, the hundreds on one side shall be made to correspond as closely as possible to the hundreds on the opposite side by allotting only twenty-five numbers, even or odd as the case may require, to the side on which the blocks are shorter.

One number shall be allowed for each one-fiftieth of the frontage of each block between two main streets,

except in blocks having a frontage of less than four hundred feet, where the allowance shall be made on the basis of one number to every eight feet of frontage.

### **Renumbering.**

Section 294. Nothing in this Ordinance shall authorize the Board of Public Works to renumber any block which is now uniformly numbered in accordance with any previous Ordinance, unless such renumbering is made necessary by the construction or alterations of buildings whereby the number of entrances to buildings on such blocks has been so increased as to prevent consecutive numbering without confusion.

### **Notice to be Given.**

Section 295. It is hereby made a duty of the Board of Public Works, whenever it has knowledge of any violation of any of the provisions of this Ordinance relating to the numbering of buildings, to give notice thereof to the owner, or, if he cannot be found to the occupant of the premises where the violation occurs; and if, after two weeks, the cause of complaint has not been removed, to have the penalty provided in this Ordinance enforced.

### **Temporary Retention of Old Numbers.**

Section 296. Wherever any property owner has been notified to change the numbers of his building the old numbers may be temporarily retained, in addition to the new numbers; provided, however, that in no case shall such old numbers be retained for a period longer than sixty (60) days after the official notice to change the same.

### **Removal of Paint From Buildings.**

Section 297. It shall be unlawful for any person, association or corporation to undertake the removal of paint from any wooden building or other structure by the process of burning without first having given the Chief Engineer of the Fire Department at least three (3) days' written notice of intention to perform said work, and without having secured permission from said



engineer as a precaution against fires and conflagrations which might arise from the careless performance of said work.

### **Board of Public Works to Stop Construction of Certain Buildings.**

Section 298. The Board of Public Works shall have the power to stop the construction of any building or the making of any alteration or repairs to any building when the same is done in a reckless or careless manner, or in violation of any of the provisions of this Ordinance, and to order in writing or verbally any and all persons in any way or manner whatever engaged in so constructing, altering or repairing any such building, to stop and desist therefrom, and the person or persons so ordered shall immediately comply therewith.

Section 299. Whenever, in the judgment of the Board of Public Works, any building, or any portion thereof, or any appurtenances thereto, or any structure, or any chimney, smokestack, stove, oven, furnace or thing connected with any building or upon any premises or place, is dangerous, defective or unsafe, the said Board shall notify the owner thereof and shall order and cause the same to be torn down, altered, repaired or rebuilt, or such work to be done thereon as the said Board deems necessary to render the same safe.

### **Inspectors' Right to Enter Building.**

Section 300. The Architect and Inspectors of the Board of Public Works and of the Department of Health, so far as may be necessary for the performance of their duties, shall have the right to enter any new or unoccupied building, or any building under construction, repair, alteration or removal, or any building alleged to be unsafe, or a menace to life and limb, upon showing their badge of office.

Section 301. Ordinance No. 31 (New Series) known as "The Building Law" of the City and County of San Francisco and entitled "Regulating the construction, erection, enlargement, raising, alteration, repair, removal, maintenance, use and height of buildings; regulating character and use of materials in and for buildings; establishing fire limits and repealing all Ordinances in conflict with this Ordinance," and New



Series Ordinances numbered 46, 53, 66, 68, 102, 123, 124, 133, 190, 196, 269, 284, 289, 293, 294, 313, 323, 343, 364, 367, 368, 377, 381, 382, 383, 393, 394, 395, 396, 423, 437, 438, 439, 447, 448, 487, 488, 489, 555, 573 and 679, amending said Ordinance No. 31 (New Series), all other Ordinances amendatory thereof and all Ordinances or parts of Ordinances in conflict herewith are hereby repealed. But this Ordinance shall not be held to apply to or to regulate the erection or alteration of any building the permit for which has heretofore been given, but such building may be completed under the regulations in force at the time such permit was given.

### **Penalty.**

Section 302. Any person, firm, company or corporation that violates, disobeys, omits, neglects or refuses to comply with, or that resists or opposes the execution of any of the provisions of this Ordinance, shall be guilty of a misdemeanor and upon conviction thereof shall be punished by a fine not exceeding five hundred (500) dollars, or by imprisonment for not more than six (6) months or by both such fine and imprisonment; and every such person, firm, company or corporation shall be deemed guilty of a separate offense for every day such violation, disobedience, omission, neglect or refusal shall continue, and shall be subject to the penalty imposed by this section for each and every separate offense; and any builder or contractor who shall construct any building in violation of any of the provisions of this Ordinance, and any architect having charge of such building, who shall permit it to be so constructed, shall be liable to the penalties provided and imposed by this section.

### **Frame Buildings in Fire Limits.**

Ordinance No. 1139. (New Series.) Providing for the Removal not later than May 1st, 1911, of all the buildings erected since April 18, 1906, within the City and County of San Francisco in violation of the Building Laws and Ordinances of said City and County of San Francisco; requiring the Board of Public Works to serve notice hereof on all owners of property affected hereby, and providing penalties for violation hereof.

Section 1. All buildings and structures erected previous to the passage of this Ordinance and subsequent to April 18, 1906, within the City and County of San Francisco, in violation of and contrary to the laws and Ordinances of said City and County of San Francisco, are hereby ordered demolished or removed on or before May 1, 1911.

Section 2. The Board of Public Works is hereby directed to forthwith serve notice upon all owners and lessees or agents of owners or lessees of property affected by the provisions of this Ordinance.

Section 3. It is hereby made the duty of the Board of Public Works to enforce the provisions of this Ordinance, and said Board of Public Works is hereby authorized and directed to demolish or remove any building or structure affected by this Ordinance upon the failure of the owner or agent of the owner thereof to comply with the terms of this Ordinance, and the cost of said demolition or removal shall constitute a first lien on said building or structure and the material thereof.

Section 4. Any person, company, corporation or association, or any officer or agent of any person, company or corporation, failing to comply with the provisions of this Ordinance shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine not exceeding \$500, or by imprisonment in the county Jail not exceeding six (6) months, or by both such fine and imprisonment.

Section 5. Ordinance No. 333 (New Series), approved January 9, 1908, is hereby repealed.

**ORDINANCE 6098**—Directing that the Board of Public Works do not sign public contracts until appropriations therefor are made.

Section 1. It is hereby ordered that the Board of Public Works do not sign any public contract until appropriation therefor shall have been made by the Board of Supervisors.

Secton 2. This Ordinance shall take effect immediately. (This Ordinance on January 7, 1924, finally passed by the Board of Supervisors, presented to his

Honor the Mayor for his approval on January 8, 1924, and returned by him on January 21, 1924, without his signature, took effect in accordance with the provisions of Section 16, Chapter I, Article II of the Charter.)—Declared invalid in City Attorney's opinion rendered to Mayor January 21, 1924.

**Ordinance No. 7519. Limiting the Height of Buildings Hereafter To Be Erected in a Certain District In The City and County of San Francisco, and Establishing the Boundaries of Said District, and Providing Penalties for the Violation of Its Provisions.** Section 1. No building, except as hereinafter provided, shall be erected in the City and County of San Francisco to a height greater than forty (40) feet, within the territory bounded by San Francisco Bay on the north, by Fillmore Street on the east, by Jackson Street on the south and by Lyon Street on the west, excepting therefrom the westerly line of Fillmore Street from the southerly line of Broadway to the northerly line of Jackson Street, and the northerly line of Jackson Street from the westerly line of Fillmore Street to the easterly line of Steiner Street, to the depth of the rear lot lines of the lots fronting on said streets as shown on the Assessor's maps for the year 1927.

Section 2. No addition to or alteration or improvement of any building within the above described district shall be made which shall increase the height of any building as limited by this ordinance.

Section 3. No limitation of the height of buildings in the City and County of San Francisco, as provided by this ordinance, shall apply to public buildings, churches, schools, steeples, towers, domes, cupolas, belfries (not used for human occupancy), nor to chimneys, gas holders, skylights, ventilators, pent houses, water tanks, flag staffs, railings, weather vanes, nor to other similar structures such as are usually erected or maintained above the roof line of buildings.

Section 4. The method of determining the height of buildings, for the purpose of this ordinance, shall be

the same as provided in Ordinance No. 1008 (New Series), and the provisions of Section 78 shall apply within said territory.

Section 5. No building permit shall be issued by the Board of Public Works for the erection or alteration of any building or structure contrary to the provisions of this ordinance, and any permit so issued shall be void.

Section 6. Any person, firm or corporation violating any provisions of this ordinance shall be guilty of a misdemeanor, and upon conviction thereof shall be punishable by a fine not exceeding \$500 or by imprisonment for a term of not exceeding six months, or by both such fine and imprisonment. Such persons, firm or corporation shall be deemed guilty of a separate offense for each and every day during any portion of which any violation of this ordinance is committed, continued or permitted by such person, firm or corporation, as herein provided.

Section 7. This ordinance shall take effect immediately.

**Limiting Height of Buildings hereafter to be erected in certain portions of Telegraph Hill**

**CODE NO. 11.08 — BILL NO. 81  
ORDINANCE NO. 11.084.**

**Limiting the Height of Buildings hereafter to be erected in a certain district in the City and County of San Francisco, and establishing the Boundaries of said district, and defining City Base, and providing penalties for the violation of the provisions hereof.**

Be it ordained by the People of the City and County of San Francisco, as follows:

Section 1. No buildings or portion thereof, shall be erected within the territory bounded by: Greenwich street on the north, Union street on the south; Grant avenue on the west and 137 feet, 6 inches easterly from the easterly line of Montgomery street on the east, which shall extend above two hundred and ninety (290) feet above City Base, which City Base is hereby declared to be 6.7 feet above mean high tide; and no

building or portion thereof, shall be erected in the territory bounded by Chestnut street on the north, Greenwich street on the south, Grant avenue on the west and 137 feet 6 inches easterly from the easterly line of Montgomery street, on the east, which shall extend above two hundred and seventy (270) feet above City Base, which City Base is hereby declared to be 6.7 feet above mean high tide.

Section 2. No building permit shall be issued by the Central Permit Bureau for the erection or alteration of any building or structure contrary to the provisions of this ordinance, and any permit so issued shall be void, except on property belonging to the City and County of San Francisco.

Section 3. Any person, firm or corporation violating any provision of this ordinance shall be guilty of a misdemeanor, and upon conviction thereof shall be punishable by a fine not exceeding \$500 or by imprisonment for a term not exceeding six months, or by both such fine and imprisonment. Such person, firm or corporation shall be deemed guilty of a separate offense for each and every day during any portion of which any violation of this ordinance is committed, continued or permitted by such person, firm or corporation, as herein provided.

**Read Second Time and Finally Passed—Board of Supervisors, San Francisco, July 5, 1932.**

Ayes: Supervisors Breyer, Brown, Canepa, Gallagher, Havenner, Hayden, McSheehy, Miles, Peyser, Power, Roncovieri, Shannon, Spaulding.

Absent: Supervisors Colman, Stanton.

I hereby certify that the foregoing ordinance was finally passed by the Board of Supervisors of the City and County of San Francisco.

J. S. DUNNIGAN, Clerk.

Approved, San Francisco, July 7, 1932.

ANGELO J. ROSSI, Mayor.

#### **BILL NO. 422**

**Ordinance No. 11.089 — Code No. 11.08**

**Limiting the Heights of Buildings hereafter to be erected in a certain district of the City and County of San**



Francisco, and establishing the Boundaries of said District and providing penalties for the violation of its provisions.

Be it ordained by the People of the City and County of San Francisco as follows:

Section 1. No building, except as hereinafter provided, shall be erected to a height greater than 105 feet within the territory bounded by Washington street on the south, Fillmore street on the west, Van Ness avenue on the east, and by a line midway between Green street and Union street on the north, in the City and County of San Francisco; provided, that no building for human occupancy within said district shall be more than eight (8) stories in height.

Section 2. No addition to or alteration or improvement of any building within the above described district shall be made which shall increase the height of any building as limited by this ordinance.

Section 3. No limitation of the height of buildings in the City and County of San Francisco, as provided by this ordinance, shall apply to public buildings, churches, schools, steeples, towers, domes, cupolas, belfries (not used for human occupancy), nor to chimneys, gas holders, skylights, ventilators, penthouses, water tanks, flagstuffs, railings, weather vanes, nor to other similar structures such as are usually erected or maintained above the roof line of buildings.

Section 4. The method of determining the height of buildings, for the purpose of this ordinance, shall be the same as provided in Ordinance No. 1008 (New Series), and the provisions of Section 18 shall apply within said territory.

Section 5. No building permit shall be issued by the Department of Public Works for the erection or alteration of any building or structure contrary to the provisions of this ordinance, and any permit so issued shall be void.

Section 6. Any person, firm or corporation violating any provision of this ordinance shall be guilty of a misdemeanor, and upon conviction thereof shall be punishable by a fine not exceeding \$500 or by imprisonment for term of not exceeding six months, or by both such



fine and imprisonment. Such persons, firm or corporation shall be deemed guilty of a separate offense for each and every day during any portion of which any violation of this ordinance is committed, continued or permitted by such person, firm or corporation, as herein provided.

**Read Second Time and Finally Passed—**Board of Supervisors, San Francisco, September 25, 1933.

Ayes: Supervisors Breyer, Canepa, Colman, Havenner, McSheehy, Miles, Peyser, Power, Roncovieri, Shannon, Spaulding, Stanton.

Absent: Supervisors Brown, Gallagher, Hayden.

I hereby certify that the foregoing ordinance was finally passed by the Board of Supervisors of the City and County of San Francisco. J. S. DUNNIGAN, Clerk.

Approved, San Francisco, September 26, 1933

J. EMMETT HAYDEN, Acting Mayor.

**Bill No. 9422. Ordinance No. 8926 (New Series) Limiting the Height of Buildings Hereafter to be Erected in a Certain District in the City and County of San Francisco, and Establishing the Boundaries of Said District, and Providing Penalties for the Violation of Its Provisions.**

Be it ordained by the People of the City and County of San Francisco, as follows:

Section 1. No building, except as hereinafter provided, shall be erected in the City and County of San Francisco to a height greater than forty (40) feet, within the territory bounded by: Fillmore Street on the west, Bay Street on the south, Buchanan Street on the east, and by the Marina Boulevard on the north, and northeast.

Section 2. No addition to or alteration or improvement of any building within the above described district shall be made which shall increase the height of any building as limited by this ordinance.

Section 3. No limitation of the height of buildings in the City and County of San Francisco, as provided by this ordinance, shall apply to public buildings, churches, schools, steeples, towers, domes, cupolas, belfries (not used for human occupancy), nor to chimneys, skylights, ventilators, pent houses, water tanks,

flag staffs, railings, weather vanes, nor to other similar structures, such as are usually erected or maintained above the roof line of buildings.

Section 4. The method of determining the height of buildings, for the purpose of this ordinance, shall be the same as provided in Ordinance No. 1008 (New Series), and the provisions of Section 78 shall apply within said territory.

Section 5. No building permit shall be issued by the Board of Public Works for the erection or alternation of any building or structure contrary to the provisions of this ordinance, and any permit so issued shall be void.

Section 6. Any person, firm or corporation violating any provision of the ordinance shall be guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine not exceeding \$500.00, or by imprisonment for a term of not exceeding six months, or by both such fine and imprisonment. Such persons, firm or corporation shall be deemed guilty of a separate offense for each and every day during any portion of which any violation of this ordinance is committed, continued or permitted by such persons, firm or corporation, as herein provided.

Section 7. This ordinance shall take effect immediately.

Finally Passed—Board of Supervisors, San Francisco, February 2, 1931.

Ayes: Supervisors Andriano, Breyer, Canepa, Colman, Gallagher, Garrity, Havenner, Hayden, McGovern, McSheehy, Miles, Peyser Roncovieri Shannan, Spaulding, Stanton, Suhr.

Absent: Supervisor Power.

J. S. DUNNIGAN, Clerk.

Approved, San Francisco, February 3, 1931.

ANGELO J. ROSSI, Mayor.

**Ordinance No. 5227 (N. S.) Limiting the amount of sub-sidewalk space to be used as basements to buildings in certain streets and reserving space beneath sidewalks for public use.**

Section 1. No permit shall hereafter be issued by any officer, board or commission of the City and County to

occupy, use or make construction in any space beneath the surface of any sidewalk area within the street lines of Van Ness avenue from Market street to North Point street, Market street between Sixth street and Castro street, Eleventh street from Market street to Division street, Division street from Eleventh street to Potrero avenue and Potrero avenue from Division street to Twenty-fifth street, excepting in the space lying contiguous to the property line and extending along a line parallel thereto and ten feet distant therefrom. The remainder of the space beneath such sidewalk area is hereby expressly reserved for public use.

Bill No. 8208. Ordinance No. 8710 (New Series). Amending Ordinance No. 8140 (New Series) Providing That Wholesale Food Terminals, Warehouses, Freight Yards and Ferry Terminals, Shall Not Be Constructed or Established, Erected or Constructed Within a Certain District in the City and County of San Francisco, and Establishing the Boundaries of Said District, and Providing for Penalties for the Violation of the Provisions Thereof, by Including in Said Prohibited Structures and Callings, Airplane Landings and Hydroplane Landings, and the Landing of Passengers from Airplanes or Hydroplanes.

Be it Ordained by the People of the City and County of San Francisco, as Follows:

That Ordinance No. 8140, the title of which is hereinbefore recited, is hereby amended to read as follows:

Section 1. No wholesale food terminal, warehouse, freight yard, or ferry terminal, or airplane landing, or hydroplane landing, or any building or structure to be used as a wholesale food terminal, warehouse, freight yard, ferry terminal, airplane landing or hydroplane landing, shall be constructed, erected or established within the territory bounded on the north by the waters of San Francisco Bay, on the east by the westerly line of Van Ness Avenue, on the south by Jackson Street, and on the west by the westerly line of Lyon Street, nor shall any structure for any of the purposes above mentioned be constructed or erected, projecting

Section 2. No building permit shall be issued or

granted by the Board of Public Works for the erection, construction, or alterations of any building, or structure, contrary to the provisions of this ordinance, and any permit so issued or granted shall be void.

Section 3. No certificate of occupancy shall be issued or granted by the Board of Health, authorizing or permitting any person, firm or corporation to occupy or use any building or structure in place within the above bounded district for or as a wholesale food terminal, warehouse, freight yard or ferry terminal.

Section 4. Any person, firm or corporation violating any of the provisions of this ordinance shall be guilty of a misdemeanor, and upon the conviction thereof shall be punishable by a fine not to exceed \$500.00 or by imprisonment in the County Jail not to exceed six months, or by both such fine and imprisonment. And any person, firm or corporation violating any of the provisions of this ordinance shall be deemed guilty of a separate offense for each and every day during any portion of which any violation of this ordinance is committed, permitted or continued by such person, firm or corporation.

Finally Passed—Board of Supervisors, San Francisco, March 17, 1930.

Ayes: Supervisors Andriano, Canepa, Colman, Gallagher, Havenner, Hayden, McGovern, McSheehy, Miles, Peyser, Power, Roncovieri, Rossi, Stanton, Suhr, Toner.

Absent: Supervisors Shannon, Spaulding.

J. S. DUNNIGAN, Clerk.

Approved: San Francisco, March 28, 1930.

ANGELO J. ROSSI, Acting Mayor.

### SENATE BILL NO. 258.

**An act in relation to fences and other structures erected to annoy, and for the abatement of nuisances.**

Section 1. Any fence or other structure in the nature of a fence, unnecessarily exceeding ten feet in height maliciously erected or maintained for the purpose of annoying the owner or occupants of adjoining property, shall be deemed a private nuisance.

Section 2. Any such owner or occupant, injured either in his comfort or the enjoyment of his estate by

such nuisance may enforce the remedies against the continuance of the same prescribed in title III, part III of the Civil Code of the State of California.

**ORDINANCE No. 7891, (N. S.—Amending Ordinance No. 1008, (N. S.), Known as the Building Law of the City and County of San Francisco, is hereby amended as follows:**

Section 1. When a building is ready for lathing or sheathing on the inside the Building Inspector shall be notified. The Building Inspector shall cause such building to be inspected within twenty-four hours, and if found to comply with the ordinances covering such work shall place his approval on the permit card. Such approval shall not give any person permission to lath or conceal any part of the frame from view until notice of inspection is posted by the Electrical Inspector. (Amended by Ordinance 7891, App. Nov. 18, 1927.)

## ASSEMBLY BILL NO. 2391.

### CHAPTER 601.

An act to regulate the construction of buildings in the State of California, in respect to resistance to horizontal forces, providing penalties for the violation thereof and providing that this act become effective immediately. (Approved by the Governor May 26, A. D. 1933.)

The people of the State of California do enact as follows:

Section 1. Every building of any character, and every part thereof which is hereafter constructed in any part of the State of California, including every incorporated city, incorporated city and county, and county except such buildings as are hereinafter expressly excepted from the operation of this act, shall be designed and constructed to resist and withstand horizontal forces from any direction or not less than either two (2) per cent of the total vertical design load or twenty (20) pounds per square foot wind pressure on the vertical projection of the exposed surface, the

horizontal force used to be the one that produces the greater stresses in the building.

Section 2. For the purposes of computing the resistance of any building to such horizontal forces as required by section 1 hereof, the computed stresses resulting from the combined vertical forces and horizontal forces shall not exceed one and one-third (1 1-3) times the allowable working stresses as hereinafter provided.

Section 3. For the purposes of this act, allowable working stresses shall be those specified in the ordinances governing the erection and construction of buildings in the city or city and county in which the building is to be constructed or if in unincorporated territory then of the county wherein the work is done.

If no such ordinance is in effect at the place at which the work is done then the allowable working stresses shall be those specified by the Division of Architecture of the State Department of Public Works, which is hereby fully authorized and empowered to specify such allowable working stresses for the purposes of this act as to any city, city and county, or county in which no such ordinance is in effect.

Section 4. This act shall not apply to the following buildings:

a. Any building not intended primarily for occupancy by human beings and no part of which is located within the limits of an incorporated city or incorporated city and county.

b. Any building designed and constructed for use exclusively as a dwelling for not more than two families and no part of which is located within the limits of an incorporated city or incorporated city and county.

c. Any building on which work has actually been commenced prior to the effective date of this act.

Section 5. Any person who constructs a building not meeting the requirements of section 1 of this act and not excepted under section 4 of this act shall be guilty of a misdemeanor.

Section 6. It shall be the duty of the building department of every incorporated city, and incorporated city and county, to enforce all of the provisions of this



act. In every county it shall be the duty of the department, officer or officers who are charged with the enforcement of ordinances or laws regulating the erection, construction or alteration of buildings in said county to enforce all of the provisions of this act outside of the limits of any incorporated city.

For the purposes of this act the term "building department" shall mean the department, bureau, or officer charged with the enforcement of laws or ordinances regulating the erection, construction, or alteration of buildings.

Every incorporated city, or city and county, and county in the State of California shall have and is hereby empowered and given authority to designate and charge by ordinance any other department or officer than the department or officers mentioned herein with the enforcement of this act or any portion thereof.

Section 7. Nothing in this act contained shall be construed as a limitation on the powers of incorporated cities, cities and counties, and counties to establish by ordinance further standards for the construction of buildings beyond the requirements of this act.

Section 8. This act is hereby declared to be an urgency measure necessary for the immediate preservation of the public peace hereof and safety within the meaning of section 1 of Article IV of the Constitution and shall therefore go into immediate effect.

The facts constituting the necessity are as follows: The series of earthquakes occurring in the southern portion of the State has caused great loss of life and damage to property. Much of this loss and damage could have been avoided if the buildings and other structures had been properly constructed. The buildings which will be constructed and reconstructed to replace the buildings damaged or destroyed by earthquake should be so constructed as to resist, in so far as is possible, future earthquakes. These buildings will be constructed and reconstructed at once and accordingly it is necessary that this act go into immediate effect in order that these buildings be so constructed that the lives and property of the people will be safeguarded.

Bill No. 275. Ordinance No. 3.04120. Code No. 3.041. An Ordinance providing for the Collection of Fees by the Department of Public Works upon the Issuance of Building Permits, and for Permits for Moving of Building, or for Construction or Alteration of Billboard or for the Erection, Installation or Alteration of Patent Chimney.

Be it ordained by the People of the City and County of San Francisco as follows:

Section 1. The applicant or applicants for a building permit shall pay the Department of Public Works for expenses of inspection and examination of the building and plans and specifications as specified in Ordinance No. 1008 (N. S.) the sum of Four (\$4.00) Dollars if the estimated cost of said building, structure, alteration or improvement shall be Five Hundred (\$500.00) Dollars or less; the sum of Five (\$5.00) Dollars if the estimated cost of said building, structure, alteration or improvement shall be more than Five Hundred (\$500.00) Dollars and less than One Thousand (\$1,000.00) Dollars; and if the estimated cost of said building, structure, alteration or improvement shall exceed One Thousand (\$1,000.00) Dollars, then the sum of Five (\$5.00) Dollars for each One Thousand (\$1,000.00) Dollars of the estimated cost or fraction thereof up to Twenty Thousand (\$20,000.00) Dollars, and Ninety (90c) Cents for each One Thousand (\$1,000.00) Dollars or fraction thereof of the estimated cost above Twenty Thousand (\$20,000.00) Dollars.

Section 2.—The applicant or applicants for the following permits shall pay the Department of Public Works for expenses in investigation of conditions and inspection of operations in connection with the same, fees as follows:

Permit for moving building \$2.00; Permit for construction or alteration of billboard \$2.00; Permit for erection, installation or alteration of patent chimney \$2.00.

Section 3. Any person, firm or corporation engaged in the erection, installation or alteration of patent chimneys may, as an option and in lieu of the above

required fee and permit, pay an annual fee of Three Hundred (\$300.00) Dollars, payable quarterly in advance, to the Central Permit Bureau, which bureau shall then issue to the person, firm or corporation having paid such fee a quarterly permit for the erection, installation or alteration of such chimney or chimneys; provided, however, that the holder of such quarterly permit shall notify the Bureau of Building Inspection, on forms supplied by said Bureau, at least twenty-four (24) hours before the erection, installation or alteration of any patent chimney or chimneys of the intention to erect, install or alter such chimney or chimneys; and, provided further, that failure to file such notice shall be sufficient grounds for canceling said permit. As amended by Ord. 3.04125, passed June 26, 1933.

Section 4. The provisions of any and all ordinances in conflict with this ordinance are hereby repealed.

**Read Second Time and Finally Passed—**Board of Supervisors, San Francisco, April 3, 1933.

Ayes: Supervisor Breyer, Brown, Canepa, Colman, Gallagher, Havenner, Hayden, McSheehy, Miles, Peyser, Power, Roncovieri, Shannon, Spaulding, Stanton.

I hereby certify that the foregoing ordinance was finally passed by the Board of Supervisors of the City and County of San Francisco.

J. S. DUNNIGAN, Clerk.

Approved, San Francisco, April 4, 1933.

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ANGELO J. ROSSI, Mayor.

**Bill No. 9292. Ordinance No. 8803 (New Series). Regulating the Establishment and Maintenance of Hospitals, Health Institutions or Nursing Homes; Repealing Certain Conflicting Ordinances and Providing Penalties.**

Be it ordained by the People of the City and County of San Francisco, as follows:

Section 1. No person, firm, corporation or association shall hereafter erect, establish or maintain any hospital, health institution or nursing home without first obtaining a permit from the Board of Health as herein provided.

Section 2. For the purposes of this ordinance, a health institution or nursing home is hereby defined to be a building or structure having accommodations for more than three sick, invalid, infirm, aged, convalescent, mentally ill, feeble-minded, incompetent, decrepit, disabled, injured, infected or chronically ill persons, where a charge is made for the care of said persons, and whether or not, in the care or treatment of said persons, use is made of drugs, medicines, surgical, electrical or physio-therapeutical procedures.

Section 3. The Board of Health shall have power to and shall issue permits for hospitals, health institutions or nursing homes hereafter established. The Board of Health shall issue a permit to each hospital, health institution and nursing home existing at the time this Ordinance becomes effective, provided that said hospital, health institution or nursing home is erected in compliance with existing fire, health and safety laws, and if not so erected, if compliance is had therewith within thirty days after written notice by the Board of Health of the particulars wherein non-compliance exists. Every permit shall specify the name and residence of the licensed person, firm, association or corporation the location of the structure and the number of persons permitted to be housed or cared for therein. Any permit shall be revocable for cause by the said Board of Health, after hearing before said Board upon service upon the holder of the permit, not less than ten days before the hearing, of a written notice of time and place of hearing and written statement of the charges, in any case where the provisions of this Ordinance, or of any fire, health or safety law has been violated and said violation has continued for more than ten days after service upon the holder of said permit of a written statement by the Board of Health of the particulars wherein said violation exists.

Section 4. No hospital, health institution or nursing home hereafter established shall be housed in a structure of frame construction, if said structure is designed to have accommodations for more than five inmates. Any such hospital, health institution or nursing home hereafter established, and having accommodations for

not more than five inmates, may be of frame construction if the same complies with all of the regulations and laws of the Building Department of the Board of Public Works, the Bureau of Fire Prevention and Public Safety and the Regulations of the Board of Health, as of the date of application for a permit. No inmate shall be housed or cared for in any attic, basement or cellar.

Section 5. The holder of a permit shall keep a register, in form approved by the Board of Health, wherein shall be entered the names and addresses, date of entry and date of discharge of all inmates and also the name and address of the nearest of kin of such inmates.

Section 6. No permit issued pursuant to this Ordinance shall be sold, assigned or transferred without written permission of the Board of Health.

Section 7. The Board of Health, its officers and representatives, and all duly appointed or elected Health Officers, shall at all reasonable times have the right to enter and inspect the said hospitals, health institutions and nursing homes, to inspect the permit and register thereof and to require compliance with this ordinance. As amended by Ord. 8835, app. Aug. 25, 1930.

Section 8. Any person, firm, corporation or association violating any of the provisions of this Ordinance shall be guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine not to exceed five hundred (\$500.00) dollars, or by imprisonment in the County Jail for not more than six (6) months, or by both such fine and imprisonment.

Section 9. Ordinance No. 823, entitled "Regulating the Establishment and Maintenance of Hospitals," and all ordinances or parts of ordinances in conflict herewith, are hereby repealed.

Section 10. This Ordinance shall take effect immediately.

Finally Passed—Board of Supervisors, San Francisco, July 15, 1930.

Ayes: Supervisors Canepa, Colman, Gallagher, Haven-



ner, Hayden, McGovern, McSheehy, Miles, Peyser, Power, Roncovieri, Rossi, Shannon, Spaulding, Stanton, Toner.

Absent: Supervisors Andriano, Suhr.

J. S. DUNNIGAN, Clerk.

Approved, San Francisco, July 17, 1930.

ANGELO J. ROSSI, Acting Mayor.

### Amending License Ordinance.

Code No. 3.041)

On recommendation of Supervisors' Committee on New Charter Installation.

Bill No. 84, Ordinance No. 3.0413, as follows:

Amending Section 32 of Ordinance No. 5132, as amended by Ordinance No. 8784 (New Series), entitled "Imposing license taxes on certain businesses, callings, trades or employments within the City and County of San Francisco."

Be it ordained by the People of the City and County of San Francisco as follows:

Section 1. Section 32(a) of Ordinance No. 8784 (New Series), the title of which is recited above, is hereby amended to read as follows:

Section 32(a). Every person employing help at any time in his contracting or building business, or every firm, association or corporation, consisting of more than one member, engaged in the occupation of and doing business as a contractor, subcontractor, or as a builder, or engaged in the construction or repair of any building, street, sidewalk, sewer, engineering structure or any engineering operation, or advertising himself or themselves as engaged in superintending building construction, sewer construction, plumbing construction, street construction, or general construction, or engaged in the business of sign or general painting (except exclusive automobile painters), shall pay a license fee of twelve and fifty one-hundredths dollars per quarter year.

(b) Every person, firm or corporation so engaged or advertising himself as so engaged in any business



or job described as above, and never employing help in such business or on any job so classified, shall pay a license fee of five (\$5) dollars per quarter year.

(c) Master electricians and master fixture electricians, as described under the provisions of Section 49 of Ordinance 5132 (New Series), shall pay the license fee provided for in Section 49, and shall thereby be exempt from the license fee imposed in Section 32(a) of this ordinance.

Ayes—Supervisors Breyer, Brown, Canepa, Colman, Gallagher, Havenner, McSheehy, Miles, Peyser, Power, Roncovieri, Spaulding, Stanton.

Absent—Supervisors Hayden, Shannon.

Finally passed June 6, 1932.

**Ruling On Use of Wire Fabric For Exterior Stucco or Plaster Work.**—John B. Leonard, superintendent of the Bureau of Building Inspection of the San Francisco Department of Public Works, on January 20, 1929, issued the following ruling on the use of wire fabric for exterior stucco or plaster work:

Wire fabric used for stucco or exterior plastering shall be galvanized and have a mesh not greater than one inch and shall not be smaller than No. 18 gauge wire. It must be spaced not less than three-eighths inch from sheathing or backing with metal spacers, and such spacers shall not exceed a horizontal or vertical pitch of 8". The fabric must be nailed to the backing with 5d. galvanized nails driven one inch into the wood and bent over at the top so as to support the fabric and prevent its outward movement. The nails shall be spaced not to exceed 8-inch pitch in either horizontal or vertical direction.

Galvanized "Tripod Crimped" wire of the same mesh and gauge may be used without spacers, but must be secured to the backing with one 5d. galvanized nail in each crimp driven one inch into the wood and bent over so as to hold the fabric securely in position.

**ELECTRICAL ORDINANCE****CODE NO. 11.11 — BILL NO. 83.  
ORDINANCE NO. 11.111**

Regulating the doing of Electrical and Fixture Work in or about Buildings in the City and County of San Francisco; providing for the Registration of all persons, Firms and Corporations doing such work and and for the Examination of Supervising Electricians and Supervising Fixture Electricians and the Issuance of Certificates of Competency to them; Fixing Fees for Registration, and Examinations, giving Power to the Chief of the Department of Electricity to Cancel or Suspend Certificates of Registration and Competency; Providing for an Appeal Therefrom, Exempting Persons now Registered, Owner Electricians, Plant Owners, and Journeymen, Helpers and Apprentices from taking Examinations; Providing for the Issuance of Permits for Doing Electrical and Fixture Work and the Fees Therefor and for the Issuance of Certificates of Approval; Providing for the Adoption and Promulgation of Rules and Regulations by the Chief of the Department of Electricity Fixing a Standard for the Installation, Construction and Operation of Electrical and Fixture Work; Providing for the Condemnation of Electrical and Fixture Work not in Conformity herewith, Forbidding the Furnishing of Electrical Current to said Condemned or Unapproved Electrical Installation; Fixing Penalties for the Violation of this Ordinance and any Rules and Regulations Adopted under Authority hereof, and Repealing all Conflicting Ordinances or Parts of Ordinances and Particularly Ordinance No. 5192 (N. S.) and Ordinance No. 5230 (N. S.)

Be it ordained by the People of the City and County of San Francisco as follows:

Section 1. The following words or phrases, wherever used in this ordinance, unless the context clearly requires a different meaning, shall be given the meaning hereinafter in this section ascribed to them and

shall be construed in accordance with such meaning and definition:

"Persons" shall include firm, corporation or co-partnership. Masculine gender shall include feminine gender. Singular shall include plural.

"Master electrician" shall include and mean every person, firm or corporation doing or installing, or causing to be done or installed under his or their supervision, any electrical work, as hereinafter defined, except as an owner electrician or plant owner.

"Master fixture electrician" shall include and mean every person, firm or corporation, doing or installing, or causing to be done or installed, under his or their supervision any fixture work, as hereinafter defined, except as an owner electrician or plant owner.

"Owner electrician" shall include and mean every person, who in a building or structure owned by himself, installs or does any electrical work or fixture work by his own personal labor and not with the labor of other persons.

"Plant owner" shall include and mean every person, firm or corporation doing or installing under his or their supervision, or causing to be done or installed under his or their supervision any electrical or fixture work, as hereinafter defined, by means of employees directly and regularly employed by said person, firm or corporation for the purpose of performing said electrical work in premises which he or it occupies or operates as owner or lessee.

"Supervising electrician" shall mean and include every person who has undergone and successfully passed the examination herein provided for to test and determine his qualifications and ability to properly install or do any electrical work and to supervise and direct the doing and installation thereof by other persons and who holds a certificate of competency as such electrician issued to him by the Chief, and shall also include and mean every person who is exempted as provided herein from taking such examination and who holds a certificate of competency as such electrician, issued to him by the Chief.

"Supervising fixture electrician" shall mean and in-

clude every person who has undergone and successfully passed the examination herein provided for to test and determine his qualifications and ability to properly install or do any fixture work and to supervise and direct the doing and installation thereof by other persons and who holds a certificate of competency as such electrician issued to him by the Chief, and shall include and mean every person who is exempted as provided herein from taking such examination and who holds a certificate of competency as such electrician issued to him by the Chief.

"Electrical work" shall mean and include the placing, installing, erecting, or connecting of any electrical wires, fixtures, appliances, apparatus, raceways, conduits, or conductors, or any part thereof which shall operate at more than 25 volts or which generate, transmit, transform, or utilize more than 50 watts; provided that electrical work as herein defined shall not mean or include the maintenance, repair or operation of electrical apparatus or minor repairs and replacements or an extension of an existing electrical circuit which is not more than six feet distant from the original outlet and which does not materially increase the load.

"Fixture work" shall mean and include the hanging, placing or installing of any electric light fixture and/or the connection of the same to electrical circuits, or any part thereof, already done or installed, whether as original work, alterations or repairs.

"Department" shall mean the Department of Electricity of the City and County of San Francisco.

"City and County" shall mean the City and County of San Francisco.

"Chief" shall mean the Chief of the Department of Electricity of the City and County of San Francisco.

Section 2. On and after the passage of this Ordinance, every master electrician, every master fixture electrician, and every plant owner, before doing or installing any electrical work or fixture work or causing the same or any part thereof or either thereof to be done or installed in or on any building or structure in the City and County shall register or cause to be registered, at the office of the Department, his or its name, and ad-

dress, and shall renew such registration annually thereafter at or before the expiration of his or its certificate of registration so long as he or it shall continue to do or install electrical work or fixture work, or to cause the same or any part thereof to be done. PROVIDED, that no master electrician, or master fixture electrician, who has been and is registered under any Ordinance of the City and County at the time this Ordinance takes effect shall be required to register until such registration shall have expired by its terms or by the provisions of the Ordinance under which such registration was made.

Nothing in this ordinance shall be construed as requiring the issuance of certificates of registration as Master Electricians, Master Fixture Electricians, or Plant Owners to any person, firm or corporation operating as a public utility as defined in the Public Utility Act of 1915 where the electrical work is incidental or necessary to the operation or conduct of the business of such public utility, or the issuance of such certificates to any public utility's affiliate, associate, subsidiary or ally, or employee or employees thereof, engaged exclusively in such electrical work for such public utility.

Section 3. On and after the passage of this Ordinance it shall be unlawful for any master electrician to do or install or attempt to do or install any electrical work or cause or attempt to cause any electrical work to be done or installed in or on any building or structure within the City and County unless he or it is, or has and keeps in his or its employ a supervising electrician, who does, or who supervises and directs the doing and installation of all such electrical work done or caused to be done by such master electrician, and it shall be unlawful for any master fixture electrician to do, place or install, or attempt to do, place or install, any fixture work, or cause or attempt to cause the same to be done or installed within or on any building or structure in the City and County, unless he or it is, or has and keeps in his or its employ a supervising fixture electrician who does, or who supervises and directs the doing, placing or installing, of all such fixture work.



done, placed or installed or caused to be done, placed or installed by such master fixture electrician.

Section 4. Before any master electrician shall be registered as provided for in this Ordinance, he or it shall be either a supervising electrician or have and keep in his employ a supervising electrician who does, or who supervises and directs the doing or installation of all electrical work done or installed or caused to be done or installed by him or it and shall give to the department the name and address of such supervising electrician so employed; and before any master fixture electrician shall be registered as provided for in this Ordinance, he or it shall be either a supervising fixture electrician or have and keep in his employ a supervising fixture electrician, who does or who supervises and directs the doing or installation of all fixture work done or installed or caused to be done or installed by him or it and shall give to the department the name and address of such supervising fixture electrician so employed. Before any master electrician or master fixture electrician shall be registered as provided for in paragraph 2 hereof, for the first time, he or it shall pay a fee of \$50.00 for such registration. There shall be no fee or charge for annual renewals of registrations. PROVIDED, that if an applicant for registration is registered under any Ordinance of the City and County at the time this Ordinance takes effect, as a master electrician or master fixture electrician and such registration has not expired or been cancelled or revoked no fee for registration shall be paid by such applicant for registration in the class in which he was registered.

Section 5. Before any certificate of competency shall be issued by the Chief to any person as a supervising electrician, he shall first, except as otherwise provided for in this section, undergo and pass an examination as shall test and determine his qualifications and ability to properly do or install electrical work and to supervise and direct the doing and installation of the same by other persons; and before any certificate of competency shall be issued to any supervising fixture electrician he shall first, except as otherwise provided for in this section, undergo and pass an examination as shall



test and determine his qualifications and ability to properly do or install fixture work and to supervise and direct the doing and installation thereof by other persons. Said examination shall be conducted by an Examining Board, consisting of the Chief of the Department of Electricity, a representative of the Board of Fire Underwriters, an electrical engineer of a public utility, a master electrician, and a supervising electrician; and shall be held in the office of the Department not more than thirty days after the filing of an application therefor, which application shall be accompanied by a fee of \$20.00; the applicant shall be given notice of the time and place of the examination to be held pursuant to his application by a written notice thereof mailed to him at the address given in his application, postage prepaid, at least five days before the date of such examination. When an applicant for examination either as a supervising electrician or supervising fixture electrician shall have taken and passed the respective examinations therefor to the satisfaction of the Chief, a certificate of competency as a supervising electrician or a supervising fixture electrician as the case may be, shall be issued by the Chief to the applicant. In the event the applicant shall fail to pass the examination taken by him there shall be refunded to him \$10.00 of the fee deposited with the application for examination. PROVIDED, that no person holding an uncanceled and unexpired certificate of registration either as a master electrician or a master fixture electrician issued to him under any Ordinance of the City and County before this Ordinance takes effect, or who shall be an officer, superintendent or employee of a person, firm or corporation holding any such certificate of registration so issued to such person, firm or corporation, and who supervises and directs the doing or installation of the electrical work or fixture work done or installed or caused to be done or installed by such person, firm or corporation, shall be required to take and undergo such examination if he makes an application for a certificate as provided for in this proviso, but he shall, on application therefor made within three months after this Ordinance takes effect and upon proof

satisfactory to the Chief that he either holds such a certificate of registration, or is such a supervising officer, superintendent or employee of a person, firm or corporation holding such a certificate of registration so issued to him or it, have issued to him by the Chief:

1. A certificate of competency as a supervising electrician if he holds such a certificate of registration as a master electrician or is such a supervising officer, superintendent or employee of a person, firm or corporation holding such a certificate of registration as a master electrician or

2. A certificate of competency as a supervising fixture electrician if he holds such a certificate of registration as a master fixture electrician, or is such a supervising officer, superintendent or employee of a person, firm or corporation holding such a certificate of registration as a master fixture electrician.

No fee shall be paid for a certificate of competency issued under the terms of this proviso.

Section 6. Every master electrician and every master fixture electrician shall before commencing or performing or causing to be done any electrical work or fixture work, pay such license fee as may be prescribed by Ordinance therefor, if any, and shall appear in person or by duly authorized agent, at the office of the Department and upon presentation of such a license, if one is required by Ordinance, or if none is so required by making a satisfactory showing to the Chief that none is required, be entitled to registration as provided for in Section 2 of this Ordinance as a master electrician or a master fixture electrician, as the case may be, upon payment of the registration fee provided for in this Ordinance, if any is required, or a showing that the same is not required and in the case of a master electrician, upon a further showing that he is, or he or it has and keeps in his or its employ a supervising electrician who does, or who supervises and directs the doing and installation of all electrical work done or caused to be done by such master electrician and in the case of a master fixture electrician, upon a further showing that he is, or he or it has and keeps in his or its employ a supervising fixture electrician who does,

or who supervises and directs the doing and installation of, all fixture work done or caused to be done by such master fixture electrician, and upon being registered, shall receive from the Department a certificate of registration as a master electrician or a master fixture electrician as the case may be, PROVIDED, that no certificate of registration shall be issued for a longer period than the date of expiration of the license held by the registrant, if any, or in any event for a longer period of time than one year, PROVIDED, further, that no certificate of registration shall be issued to any master electrician or master fixture electrician whose certificate of registration shall have been previously cancelled or annulled under the requirements and provisions of this Ordinance within one year prior to the date of application for registration. If a certificate of registration shall be cancelled or annulled, the applicant for re-instatement shall pay the same fee for registration as if not registered before.

Section 7. Before any "plant owner" shall be registered as provided in Section 2 hereof, for the first time, he or it shall pay a fee of ten dollars (\$10.00) to the Department of Electricity for such registration. There shall be no fee for annual renewal of registration. On application for registration by any person, firm or corporation desiring to do "electrical work" or "fixture work" as a "plant owner," it shall be the duty of the Department to first make a survey of all existing electrical equipment and installation in premises occupied by said "plant owner" to determine whether or not said "plant owner" is entitled to such registration. No such registration shall be granted by the Chief of the Department to any person, firm or corporation whose plant does not warrant a regularly employed maintenance electrician. Certificate of Registration as "plant owner" shall be granted for a period of one year only.

Section 8. It shall be unlawful for any Plant Owner to do any electrical or fixture work, except under the following conditions: (a) Such electrical or fixture work is done by or under the direct supervision of the employee registered as provided in Section 9 hereof; (b) At the time of the doing of such electrical or fixture

work such individual firm or corporation holds a valid uncanceled and unsuspended certificate of registration as a Plant Owner. (c) Such electrical or fixture work is done only on or in a building or structure within the City and County which is occupied or operated by such Plant Owner as owner or lessee. (d) Such electrical work is done in accordance with the approved standards, rules and regulations of the Department as prescribed and determined in Section 20 of this Ordinance. (e) All other requirements of this Ordinance appertaining to the doing, reporting and inspecting of electrical work done by Plant Owner are complied with. The Chief may cancel or suspend the certificate of registration of any Plant Owner violating any of the provisions of this section.

Section 9. A Plant Owner registered as provided in this Ordinance as the person who does or directs the doing of electrical work shall not be required to undergo or pass any examination by the Department or Chief, or to hold any certificate of competency as a supervising electrician or supervising fixture electrician; it being the intent of this Ordinance to permit Plant Owners, as herein defined, to do their own electrical and fixture work on their own premises by their own employees, provided said Plant Owner keep the Department advised of the name and address, or change thereof, of the employee who is to do or supervise the doing of such electrical work; and provided further that all requirements of this Ordinance are complied with. Employees doing electrical work for said "plant owner" are not required to pass an examination or pay a fee.

Section 10. The Chief shall have power to issue all certificates of registration and certificates of competency, provided for in this Ordinance and to suspend or cancel certificates of competency upon a finding that the holder thereof habitually does electrical work or fixture work not in accordance with accepted and approved electrical standards or ordinances of the City and County or rules and regulations adopted and promulgated under authority thereof and which is dangerous to life or property, and shall have power to

cancel and annul or suspend the certificate of registration provided for in Sections 6 and 7 hereof issued to any master electrician, master fixture electrician or plant owner, if he shall ascertain and find that such master electrician, master fixture electrician, or plant owner habitually does any electrical work or fixture work, not in accordance with approved electrical standards or ordinances of the City and County or rules and regulations adopted and promulgated under authority thereof or which the Chief may regard as dangerous to life or property. It shall be unlawful for any master electrician, master fixture electrician, plant owner supervising electrician, or supervising fixture electrician whose certificate has been suspended, cancelled or annulled to do or install or cause to be done or instilled any electrical work or fixture work until he or it has been reinstated by the Chief and either a new certificate of registration or certificate of competency issued him as the case may be.

From any decision of cancellation, annulment or suspension of a certificate by the Chief, the holder of such certificate so cancelled, annulled or suspended may appeal to the Board of Permit Appeals, as provided by, and in conformity with, the terms of Section 39, Charter of the City and County of San Francisco, ratified by the Legislature of the State of California on the 13th day of April, 1931.

Section 11. Nothing contained in this Ordinance shall be construed as applying to or affecting a journeyman electrician, helper or apprentice doing or installing electrical work or fixture work when he is employed by a master electrician, master fixture electrician or plant owner holding an uncanceled, and unsuspended certificate of registration, and at the time such journeyman, helper or apprentice is doing such work he is doing the same for a master electrician, master fixture electrician or plant owner.

Section 12. It shall be unlawful for any master electrician, master fixture electrician or plant owner to permit his or its name or certificate of registration to be used by any other person, firm or corporation for the purpose of obtaining a permit from the Department



for doing either electrical work or fixture work which is not to be done or installed by the master electrician, master fixture electrician or plant owner obtaining such permit, and for a violation of the provisions of this section of this Ordinance, in addition to any other penalties provided for the Certificate of registration of the master electrician, master fixture electrician or plant owner so violating such provisions shall be revoked and cancelled.

Section 13. It shall be unlawful for any Supervising electrician or supervising fixture electrician to permit his name to be used, or to knowingly permit himself to be held out, as the officer, superintendent or employee of any master electrician or master fixture electrician doing or supervising and directing the doing or installation of the electrical work or fixture work done or caused to be done by such master electrician or master fixture electrician, unless he is in fact such officer, superintendent or employee doing, or supervising and directing the doing and installation of the electrical work or fixture work done or caused to be done by such master electrician or master fixture electrician. Upon termination of an employment such officer, superintendent or employee shall within five days give notice in writing of that fact to the Department, and for a violation of the provisions of this section, the Chief may cancel the certificate of competency issued to any person so violating such provisions.

Section 14. Whenever a supervising electrician or supervising fixture electrician, who does or who supervises and directs the doing or installation of the electrical or fixture work done by a master electrician or master fixture electrician respectively, shall leave or be discharged from the employ of such master electrician, master fixture electrician, notice in writing thereof shall be given within five days by the employer to the Department, and the certificate of registration of such master electrician or master fixture electrician shall without further order or action of the Department or Chief stand suspended until the employment by him or it of another supervising electrician or supervising fixture electrician, as the case may be, and notice in



writing has been given by the employer to the Department, countersigned by such supervising electrician or supervising fixture electrician. During the period of time when such certificate is so suspended it shall be unlawful for the holder thereof to do any electrical or fixture work within the City and County.

Section 15. Every person, firm or corporation shall before doing or installing or causing to be done or installed any electrical work in or on or about any building or structure in the City and County, file with the Department on form to be furnished by it a written application for a permit to do such work and obtain a permit therefor. Such form and application in addition to other matters required by the Department shall contain a brief specification showing the nature and kind of the electrical work to be done or installed and the location and description of the premises wherein and whereon the said work is to be done or installed. At the time the application is filed, the estimated fees for making the inspection of the electrical work to be done or installed shall be paid. No permit shall be issued until such application is filed and payment made. Said permit shall be issued by the Department and only to a master electrician, master fixture electrician, owner electrician or plant owner, and when issued shall be conspicuously posted on the premises wherein or whereon the electrical work therein described is to be done or installed. No person, firm or corporation, registered as a master electrician or master fixture electrician shall file an application for a permit to do or install any electrical work unless such person, firm or corporation has a contract to do, or install the same, or intends to do and/or install such electrical work on his or its own behalf and for his or its own account. The Chief shall have power to cancel any permit found by him to be issued contrary to the provisions of this paragraph.

The Chief shall also have power to cancel permits where the electrical work therein provided for has not been commenced within sixty (60) days from and after the date of issuance of the permit therefor, and in the event of such cancellation of such permit the fees paid

therefor shall be credited to the account of the person, firm or corporation paying the same and may be treated as a payment pro tanto of the estimated fees payable on any subsequent application or applications for a permit to do electrical work.

Nothing in this Ordinance shall be construed as requiring any person, firm or corporation operating as a public utility to file any application for permits to do, or to have inspection made of, any electrical work necessary for the generation and supply of electrical energy to the public as a public utility, or for the generation and supply of electrical energy for electric street railway purposes; provided, however, that this exemption shall not relieve such public utility from the necessity of filing applications for permits for any other electrical work or of having the same duly inspected and paying the fees therefor.

Section 16. It shall be unlawful to cancel, or cause to be cancelled any electrical work in or on or about any building or structure before the same has been inspected by the Department and its approval posted on such building or structure wherein or whereon such electrical work has been done or installed.

Section 17. Every person, firm or corporation doing or installing or causing to be done or installed any electrical work in, on or about any building or structure in the City and County shall notify the Department when the same is completed. The Department shall then inspect the same, and if done in compliance with all State laws and rules and regulations promulgated thereunder and all ordinances of the City and County and rules and regulations adopted and promulgated under authority thereof, there shall be issued by the Department to said person, firm or corporation doing or installing or causing to be done or installed such electrical work, a certificate of inspection and approval, which shall contain the date of approval and in concise terms specify the electrical work thus approved, and be issued only for electrical work for which a permit has theretofore been issued. No current shall be supplied to any such electrical work or any part thereof until a certificate of inspection and approval shall have been

issued, nor shall any change, alteration or extension be made in the said electrical work or any part thereof after the inspection of the same without first notifying the Department in writing and obtaining a permit therefor. Such change, alteration or extension shall be inspected and approved before any current shall be supplied thereto.

Section 18. The failure, neglect or refusal on the part of any person, firm or corporation for a period of ten (10) days after receipt of notice in writing by the Department to correct, obviate or remove any fault, error or deficiency in the doing or installing of any electrical work or any part thereof done or installed or caused to be done or installed by him or it, in, on or about any building or structure in the City and County, or to cause the same to conform with the provisions of all ordinances of said City and County and all rules and regulations adopted and promulgated under authority thereof, shall be deemed sufficient cause for revoking and cancelling any certificate of registration issued by the Department and held by such person, firm or corporation.

Section 19. Every person, firm or corporation or association or agent thereof or person acting for and on behalf of any thereof, owning, leasing, operating or in possession of any building or structure within the City and County shall permit the Inspector of the Department to enter such building or structure as often as shall be deemed necessary by the Department for the purpose of inspecting the electrical work theretofore done or installed in, on or about such building or structure, and it shall be unlawful for any owner, lessee or occupant of any premises wherein or whereon any electrical work has been done or installed and is being used or is in use to prevent, or interfere with any such Inspector, in the discharge of his duties under this ordinance, PROVIDED, however, that the said Inspector shall, upon request of the owner, lessee or occupant of said premises exhibit his authority to make such inspection. If the Chief or any Inspector of the Department find that any installation of any electrical work is defective or not in accordance with the provisions

of any ordinances of the City and County or any rules and regulations adopted and promulgated under authority thereof or is dangerous to life or property, the same shall be condemned and the use thereof forbidden until the same has been corrected. Upon failure of any person, firm, corporation or association owning, leasing or in possession of and using any building or structure in the City and County to correct or cause to be corrected such defective and condemned electrical work or any part thereof for a period of ten (10) days after receipt of written notice thereof from the Department to do so, which notice shall specify the corrections to be made, the Chief shall forthwith direct the corporation, firm, person or association, or agent thereof, or person acting for and on behalf thereof, who shall be supplying electrical current or power to such electrical work or any part thereof to disconnect and discontinue the supply thereof. It shall be unlawful for any such person, firm, corporation or association or agent thereof or person acting for and on behalf of any of them and so supplying such current to furnish or renew said supply of current without permission of the Chief to do so.

Section 20. No electrical or fixture work shall be installed or constructed which is dangerous to life or property, and all electrical and fixture work within the City and County shall be done, installed and constructed in conformity with the rules and requirements of the National Electrical Code as approved by the American Standards Association, except as such rules and requirements are modified or supplemented as provided in this section. The Chief is hereby given power and it shall be his duty, as soon as practicable after this ordinance takes effect, to hold a hearing or hearings on ten (10) days' notice of the time and place thereof, given by publication in the then official newspaper of the City and County, to determine generally accepted standards and methods governing electrical and fixture work, in modification of or supplementary to the rules and regulations of the National Electrical Code. As soon as he shall have ascertained the same and made his findings thereon, such modifications thereof and

supplementary rules and regulations shall be set forth and adopted by him in a report in the form of rules and regulations governing electrical and fixture work, which rules and regulations shall not be contrary to or inconsistent with any law of the State of California or ordinance of the City and County, and shall forthwith upon adoption be posted in the office of the Department of Electricity, and notice indicating such adoption and posting shall be published for a period of five days in the then official newspaper of the City and County. On the first day after the completion of the publication of the notice as aforesaid, the said rules and regulations shall take effect as the standard to which all persons, firms or corporations doing installing or constructing electrical or fixture work shall conform. No certificate of inspection and approval provided for in this ordinance shall be issued unless the electrical or fixture work therein described shall conform with the rules and regulations in effect at the time the permit therefor is issued. The Chief shall hold a hearing or hearings at such other times as he may deem it to be necessary, to ascertain and determine what changes have been made in the standards and methods adopted supplementary to the National Electrical Code, which hearing or hearings shall be held only on the giving of a like notice as in the hearing hereinabove provided for. If the Chief shall find that the accepted standards and methods adopted as supplementary thereto have been changed, he shall make and adopt such changes or modifications thereof as amendments, additions to or repeals of the then existing rules and regulations, which amendments, additions or repeals shall forthwith upon their adoption be posted in the office of the Department of Electricity, and notice indicating such adoption and posting shall be published in the then official newspaper of the City and County for a period of five days, and shall take effect on the first day after the completion of the publication of notice as aforesaid.

As amended by Ordinance No. 11.112. Approved Sept. 20, 1933.

Section 21. It shall be the duty of the Chief to turn all moneys received under this ordinance into the treas-



urer of the City and County. If the payment made at the time of application for a permit shall be insufficient in amount to pay the fees for inspection, no certificate of inspection and approval shall be issued until the balance of such fees shall be paid in full.

Section 22. This ordinance shall not be construed to relieve from or lessen the liability of any person, firm or corporation owning, operating or installing any electrical work, or causing the same or any part thereof to be done, for damages to anyone injured by any defect therein or any negligent doing or installation thereof, nor shall the City and County or any agent therefor be held liable therefor by reason of any inspection herein authorized and made by reason of such authority, or by reason of the certificate of inspection and approval issued by the Department.

Section 23. Nothing in this Ordinance shall be construed in any way to regulate the installation of wires, fixtures, appliances, construction or equipment of any telephone, telegraph, district messenger systems, or other protective signal systems operating at not more than one hundred sixty (160) volts, or clock circuits operating at not more than two hundred fifty (250) volts for a period not to exceed one (1) second duration once an hour, and installed and maintained according to generally approved electrical standards, and the same are hereby exempt from any of the provisions of this Ordinance, except that approved protectors or fuses must be provided and used where such wires enter or leave any building where such circuits are so placed as to be liable to accidental contact with electric light, power or any other wires operating at a potential exceeding two hundred fifty (250) volts; nor shall this Ordinance be construed as in any way to regulate the connecting or disconnecting of any temporary current measuring device, which is hereby exempted from all the provisions of this Ordinance.

Section 24. Every person, firm or corporation shall pay to the Department before the permit provided for



in this ordinance is issued, the following fees or so much thereof as shall be applicable to the work to be done and inspected and approved, viz.:

1. For each lighting outlet, switch or convenience receptacle ..... \$0.15
2. For each outlet used for outline, decorative, border, strip or foot lighting..... .05
3. For each transformer not over 500 volt-amperes used on high voltage decorative or outline lighting ..... .25
4. For each fixture connection ..... .15  
(or a flat fee of \$250.00 per annum.)
5. For each circuit, except lighting and convenience receptacle circuits ..... .50
6. For connection of each motor (including control equipment), generator, transformer, or other devices consuming or generating current, up to and including 15 kilowatt, K. V. A., horsepower or fraction thereof, per kilowatt, K. V. A., horsepower or fraction thereof.. .25  
Over 15 kilowatt, K. V. A., horsepower or fraction thereof, per connection..... 4.00
7. For the connection of each heating device, including protection equipment, per kilowatt or K. V. A. .... .10
8. For each screw base receptacle with terminal inside outlet box or fitting..... .05
9. For temporary wiring and connecting equipment up to and including 10 kilowatt, K. V. A., or horsepower ..... 1.00  
Over 10 kilowatt, K. V. A., or horsepower..... 2.50
10. Providing, however, as a minimum the total amount of any bill or fees to be charged shall not be less than one (1.00) dollar.

Section 25. If any person, firm or corporation, or agent thereof, or any person acting for and on behalf of either thereof, shall, after notice thereof has been given in writing by the Department and an opportunity to be heard, be found to have done any electrical or fixture work without first applying for a permit therefor in violation of the provisions of this ordinance appertaining thereto, such person, firm or

corporation or agent thereof or person acting for and on behalf of either thereof shall pay to the Department, for the inspection of such electrical or fixture work before a certificate of inspection and approval therefor shall be issued, the following fees or so much thereof as shall be applicable to the work done, inspected and approved:

1. For each lighting outlet, switch or convenience receptacle ..... \$0.75
2. For each outlet used for outline, decorative, border, strip or foot lighting..... .25
3. For each transformer not over 500 volt-amperes used on high voltage decorative or outline lighting ..... 1.25
4. For each fixture connection ..... .75
5. For each circuit, except lighting and convenience receptacle circuits ..... 2.50
6. For connection of each motor (including control equipment), generator, transformer, or other devices consuming or generating current, up to and including 15 kilowatt, K. V. A., horsepower or fraction thereof, per kilowatt, K. V. A., horsepower or fraction thereof ..... 1.25
- Over 15 kilowatt, K. V. A., horsepower or fraction thereof, per connection ..... 12.00
7. For the connection of each heating device, including protection equipment, per kilowatt or K. V. A. .... .50
8. For each screw base receptacle with terminal inside outlet box or fitting ..... .75
9. For temporary wiring and connecting equipment up to and including 10 kilowatt, K. V. A., or horsepower ..... 3.00
- Over 10 kilowatt, K. V. A., or horsepower..... 7.50
10. Provided, however, that the minimum bill of fees to be charged and paid for any inspection under the provisions of this section shall be Ten Dollars.

Section 26. For the inspection of any electrical work for which no fee is herein prescribed, and for the inspection of temporary installation for decorative advertising, theatrical or similar purposes, there shall be

charged to and paid by the firm, person or corporation or agent thereof or person acting for and on behalf of either thereof, who shall install or do such work or cause the same to be done or installed, a fee not to exceed one dollar and fifty cents (\$1.50) an hour for the time actually consumed by each inspector making such inspection, before a certificate of inspection and approval shall be issued.

Section 27. Any person, firm or corporation who violates this ordinance or any section or part thereof, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall, in addition to any other penalty herein provided for be punished by a fine not exceeding five hundred dollars (\$500.00) or by imprisonment for not more than six months in the County Jail, or by both such fine and imprisonment. Every person, firm or corporation shall be deemed guilty of a separate offense for each day such violation shall continue, and shall be subject to the penalty imposed by this section for each and every separate offense.

Section 28. All ordinances and parts of ordinances in conflict with the provisions of this ordinance and particularly Ordinance No. 5230 (New Series) regulating the business of doing electrical installation, fixture and connection work and providing for the registration and examination of persons engaged in the same, and creating an examining board, and providing a penalty for a violation thereof, approved September 17, 1930, and Ordinance No. 5192 (New Series) regulating the installation, construction, operation and inspection of electrical wires, fixtures, appliances and apparatus in, on or about buildings or other structures in the City and County of San Francisco, fixing a standard therefor, providing for the granting of certificates to master electricians and fixture men and for the revocation thereof and providing for the condemnation of electrical work, installation, fixtures or apparatus not in conformity therewith and forbidding the furnishing of electrical current and fixing penalties therefor, approved July 2, 1920, are hereby repealed; provided that the repeal of sections I, J, K, L, M, N, O, R, Q, W, X and Z of said Ordinance No. 5192 shall not become effective

until the rules and regulations herein provided for are adopted and promulgated by the Chief, and have gone into effect as herein provided.

Section 29. In the event that any part, clause or sentence of this ordinance shall be adjudged void and of no effect, such decision shall not affect the validity of the rest and remaining portion of this ordinance.

**Read Second Time and Finally Passed**—Board of Supervisors, San Francisco, June 6, 1932.

**Ayes:** Supervisors Breyer, Brown, Canepa, Colman, Gallagher, Havenner, McSheehy, Miles, Peyser, Power, Roncovieri, Spaulding, Stanton.

**Absent:** Supervisors Hayden, Shannon.

I hereby certify that the foregoing ordinance was finally passed by the Board of Supervisors of the City and County of San Francisco.

J. S. DUNNIGAN,  
Clerk.

Approved San Francisco, June 14, 1932.

ANGELO J. ROSSI,  
Mayor.

**ORDINANCE NO. 5231. (New Series.) Amending Section 49 of Ordinance No. 5132 (New Series) Entitled "Imposing License Taxes on Certain Businesses, Callings, Trades or Employments Within The City and County of San Francisco. Section 49. Every person, firm or corporation engaged in the business of master electrician, or of master fixture electrician, contracting to install, construct or repair electric wires, appliances or apparatus, in, or about buildings or other structures, in the City and County of San Francisco, shall pay a license of fifty (\$50) dollars per annum.**

All licenses issued under the provisions of this section shall be issued to the applicant for a period of one year, to date from the expiration of the last license of such applicant, or from the date that the applicant shall have commenced business for which the license is required; provided that the Tax Collector shall not issue any license under this section unless the applicant shall present a certificate of registration from the Department of Electricity.

Section 2. This Ordinance shall take effect October 1, 1920.

**ORDINANCE No. 8319, (N. S.)**—Providing for the erection of towers on the roofs of Class A and B buildings, for the purpose of carrying the antenna of high standard radio phone broadcasting stations, and repealing ordinance No. 5785 (N. S.), App. Dec. 28, 1922.

Section 1. Towers for the purpose of carrying the antenna of high standard radio phone broadcasting stations may be erected on the roofs of Class A and Class B buildings only.

Such towers shall be constructed of structural steel that has been galvanized after fabrication. They shall be designed to resist in every direction, without exceeding the stresses specified in Sections 48 and 49 of the San Francisco Building Laws, all stresses caused by dead and imposed loads and a horizontal force of thirty (30) pounds per square foot, acting on the areas of all surfaces of the tower projected normal to the direction of the force.

All towers shall be securely anchored to the supporting structure, which shall be sufficient to carry all tower stresses in addition to those of the building without exceeding the permissible dead and live load stresses. No material less than one-eighth inch ( $\frac{1}{8}$ " ) in thickness will be permitted in any part subject to stress. Upon completion of erection all of the steel work shall be given a coat of paint suitable for application to galvanized surfaces.

Section 2. Ordinance No. 5785 (N. S.), approved December 28, 1922, is hereby repealed.

**Bill No. 9367. Ordinance No. 8962 (New Series).** Regulating the Installation, Alteration, and Maintenance of Signs, Sign Devices, and Sidewalk Clocks, Fixing a Penalty for Violations of the Provisions Thereof, and Repealing Ordinance No. 1009 (New Series) and All Ordinances or Parts of Ordinances in Conflict Therewith.

Be it ordained by the People of the City and County of San Francisco as follows:

Section 1. This Ordinance shall be known as the

"Sign Ordinance" of the City and County of San Francisco.

Section 2. It shall be unlawful for any person, firm or corporation hereafter to place or maintain upon or in front of, or attach to any building or premises, any sign, advertisement, transparency, bulletin board, or sidewalk clock, projecting beyond the property line over any sidewalk or public thoroughfare, except such signs are embraced within the classification of Section 11 and subject to the conditions stated herein; provided that this Ordinance shall not be deemed to apply to "Billboards," as defined and regulated by Ordinance No. 4059 N. S., nor to render unlawful the maintenance of any sign, advertisement, transparency, or bulletin board erected and maintained under a lawful permit prior to the passage of this Ordinance.

Section 3. No sign, transparency, advertisement, bulletin board, or sidewalk clock shall hereafter be placed, maintained upon or in front of, or attached to any building, structure, or premises, without a permit therefor from the Board of Public Works. Application for such permit shall be made to the said Board of Public Works by the owner, lessee, or agent thereof, of the property on which the proposed sign is to be located, on the form and in the manner required by the said Board. Said application shall be accompanied by duplicate scale or dimensional drawings of the proposed sign, which shall show fully the location, dimensions, and construction thereof, together with such other information as may be required. When the proposed sign is to be attached to a building or other independent structure, the drawings shall show the position of the sign on the supporting structure, the method of attachment to such structure, and the character of the structural members to which such attachment is made.

Section 4. It shall be the duty of the Board of Public Works, through its authorized representatives, upon the filing of application and exhibits as provided in Section 3, to examine such drawings and other data and, if necessary, the premises upon which it is proposed to erect the sign, and if it shall appear that the proposed sign is in accordance with all legal require-



ments, the Board of Public Works shall issue a permit for the erection of the sign. During the erection of the sign, and upon the completion thereof, the Board of Public Works shall cause the same to be inspected.

Section 5. All rights and privileges acquired under the provisions of this Ordinance or any amendment thereto, permitting the erection or maintenance of signs or sidewalk clocks on or over sidewalks or public thoroughfares, are mere licenses revocable at any time by the Board of Supervisors, and all such permits shall contain this proviso.

Section 6. Any person, firm, or corporation maintaining a sign or advertisement upon or in front of the premises of which he, she or they are the owner or occupant, or over which he, she or they have control, shall upon notice from the Board of Public Works, cause such signs or advertisements to be placed and secured in such manner as the said Board may direct. In case of failure to comply with such notification, the Board of Public Works is authorized to cause the removal forthwith of such sign or advertisement, and without prejudice to the penalties herein imposed for violations of this Ordinance.

Section 7. Before any sign, transparency, advertisement or sign device is erected which is intended to be used in connection with electricity, a permit shall be secured from the Board of Public Works as provided in Sections 3 and 4, and this permit, together with all necessary data regarding the proposed electrical construction, shall be submitted to the Department of Electricity. It shall be the duty of the Department of Electricity to examine such electrical data, and if the proposed sign is found to be in accordance with all Ordinances regarding electrical construction, and the provisions herein regarding illuminating qualities, the said Department shall issue a permit for the erection of such sign. No sign intended to be used in connection with electricity shall be erected unless permits therefor have been secured from both the Board of Public Works and the Department of Electricity.

Section 8. Upon the completion of the electrical construction for which permit is issued or required as here-

in provided, the Department of Electricity shall inspect the sign, and if it is found to be in accordance with all requirements regarding electrical construction and illuminating qualities, the said Department shall issue a Certificate of satisfactory inspection to the permittee. upon the payment to the said Department of a fee in the amount of Two Dollars and Fifty Cents (\$2.50) for each hour of time reasonably consumed by each inspector in making such inspection, including time reasonably consumed in going from the office of the said Department to the place of inspection, and return to the said office; provided, however, that the minimum such fee shall be Three Dollars (\$3.00). The issuance of the Certificate of satisfactory inspection shall constitute a permit for the connection of electric current to the sign. Prior to the issuance of such certificate, such current shall be turned on only by special permission of the Department of Electricity, and only for the purpose of testing the sign.

#### Section 9. Definitions.

(9.1) The word "sign" as used herein when appearing alone, shall be understood to include all types of signs, sign devices, advertisements, transparencies, bulletin boards on or attached to any building, structure, or premises, and shall also include sidewalk clocks; provided, however, that the said word shall not include "bill-boards" as defined in Ordinance No. 4059 N. S.

(9.2) "Electric sign" shall mean a sign whereon letters, figures, or designs are formed or outlined by incandescent electric lights, "Neon" or other luminous electric tubes, or by a transparent medium illuminated from electric lights or luminous tube contained within the sign. Electric lights or luminous tubes which are not an essential element of the sign proper, are not classified as electric signs within the meaning of this Ordinance.

(9.3) "Face of Building" shall be construed to mean the general outer surface of the walls of the building facing the street, except where bay windows or pillars project beyond such walls, the outer surface of such windows or pillars shall be considered the face of the building at those points.

(9.4) Where the distance from sign to sidewalk is specified, there is meant the clear distance from the bottom of the sign or the frame thereof, to the highest point of the sidewalk immediately beneath such sign.

#### Section 10. General Specifications.

(10.1) All fixed signs, except those lying flat against the surface of the building to which they are attached, shall be designed to withstand wind loadings as follows, the detail design to be in accordance with the provisions of the Building Law:

(a) For solid signs, twenty (20) pounds per square foot on one face of sign.

(b) For skeleton signs, thirty-six (36) pounds per square foot of the total face area of the letters or other sign surface, or ten (10) pounds per square foot on the gross area within the frame of the sign proper, whichever is the greater.

(10.2) Metal shapes or flats used for supporting or bracing signs, shall be not less than one-eighth ( $\frac{1}{8}$ ) inch thick, and shall be galvanized or porcelain enameled. Where wire is used to support or brace signs, it shall be galvanized or equal.

(10.3) All electric signs shall be constructed throughout of non-combustible materials.

(10.4) The amount of illumination supplied to an electric sign shall not be less than eight candle power, or three-fourths ( $\frac{3}{4}$ ths) lineal foot of Neon Tubing per square foot area of the illuminated side or sides of the sign. As amended by Ord. 9083, app. October 26, 1931.

(10.5) The illuminating elements of all electric signs shall be maintained in good order and in the full number for which the sign was designed.

(10.6) No sign other than electric sign shall project more than twelve (12) inches from the face of the building, nor shall any electric sign project beyond the curb line of the sidewalk below such sign.

(10.7) No double or triple face electric sign shall be more than four (4) feet thick between sign faces.

(10.8) No sign which projects more than eight (8) inches over a public sidewalk or thoroughfare, shall be less than eight (8) feet above the sidewalk; provided, however, that this provision shall not apply to non-electric pole signs when the base thereof is placed at sidewalk elevation.

(10.9) No sign other than a swinging electric or marquee sign shall extend across or in front of any window or other exterior opening in any building above the first story thereof, nor across the end windows or the end three (3) feet of glass front at each side of a mezzanine floor.

(10.10) No sign shall be attached to any fire escape or standpipe, and none except marquee signs shall be placed in front thereof, nor shall any sign be so placed as to obstruct the means of ingress or egress of a building.

Section 11. The classification of signs referred to in Section 2, and the special conditions pertaining to each classification, shall be as follows:

Class A. Flat or curved signs, plain or electric, the face of the sign being parallel for its whole length to the face of the building, and the sign fastened directly thereto. Such signs shall project not more than ten (10) inches from the face of the building unless the sign is ten (10) feet or more above the sidewalk, in which case they may project not to exceed eighteen (18) inches.

Class B. Drum signs attached to the pillars or entrances of buildings, and projecting not more than eight (8) inches from the face of the building unless the sign is eight (8) feet or more above the sidewalk, in which case they may project not to exceed twelve (12) inches. Provided, an electric drum sign ten (10) feet or more above the sidewalk may project not more than four (4) feet.

Class C. "V" signs, attached to their ends to the face of the building, and with the apex projecting therefrom not more than eight (8) inches unless the sign is eight (8) feet or more above the sidewalk, in which case this projection may be made not to exceed twelve

(12) inches. Provided, an electric "V" sign ten (10) feet or more above the sidewalk may project not more than four (4) feet.

Class D. Barber pole and similar type signs, free from any separate signs attached thereto, and projecting not more than fourteen (14) inches from the face of the building.

Class E. Horizontal double face or triple face signs illuminated and conforming to the following specifications:

(a) Swinging electric signs having a maximum height not to exceed seven (7) feet nor projecting beyond the outer edge of the sidewalk nor having their lowest point less than ten (10) feet above the sidewalk. Provided also that such signs shall be erected in such manner as to permit their being swung back parallel with the face of the building and when so swung back the sign shall not project more than twenty (20) inches from the face of said building, or supporting element at property line. Further provided that said signs shall be swung back between the hours of 8:00 A. M. and 5:00 P. M.

(b) Horizontal electric signs having a maximum height not to exceed five (5) feet nor projecting from the face of the building for more than one-half ( $1/2$ ) the width of the sidewalk, nor in any case more than seven (7) feet, nor having their lowest point less than ten (10) feet above the sidewalk. Provided also that they shall be mounted in such a way as to permit their being swung back parallel with the building face (in case of emergencies, such as fire), but shall be fastened permanently with galvanized metal cables and turnbuckles in their extended position for normal usage, the lateral guys to be not more than ten (10) feet above the sidewalk at their point of attachment to the building.

Class F. Double face vertical electric signs, illuminated on both sides, the face of the sign set at right angles to the face of the building, except that at a corner of the building which is also a street corner, the sign may be so set that the plane of the sign bisects the angle formed by the intersecting wall faces. The

limiting dimensions pertaining to such signs shall be as follows:

Height Above Sidewalk Feet	Maximum Projection		Min. Length of Sign Feet
	From Face of Building Feet		
10	4		8
12	5		10
15	6		20
18	7		30
20	8		40
23	9		50
25	10		60

Class G. Single face vertical electric signs having a maximum width of six (6) feet placed either flat against the building or at an angle of forty-five (45) degrees with the walls at a corner thereof which is also a street corner. Such signs shall be not less than twelve (12) feet above the sidewalk, nor shall any portion project above the fire wall of the building.

Class H. Gas or electric lamp or lamp globes on which signs may be placed, such lamps or globes to be suspended in front of the building or premises, not less than eight (8) feet above the sidewalk, nor projecting more than two and one-half (2½) feet from the face of the building. No inscription or sign other than the name of the person, firm, or corporation at whose expense and in front of whose premises the lamp is erected shall be placed thereon, nor shall the size of such lamp or globe exceed that of those used in lighting the public streets.

Class I. Flat or curved mesh signs with raised letters. Such signs may be extended from the front of one bay window above the first story to an adjacent bay window, provided that the sign shall not project more than six (6) inches from the front of the bay window.

Class J. Bulletin boards, which shall not project more than eight (8) inches from the face of the building.

Class K. Signs supported upon metal awnings or marquees. Such signs shall be not less than ten (10) feet above the sidewalk, and unless electric signs, shall be not more than two (2) feet in vertical dimension; if



electric signs, their vertical dimension shall be not more than sixty-five (65) per cent of the projection of the marquee from the face of the building. When projecting above the roof of the marquee, the face of signs parallel with the building, or the apex of the "V" signs, shall be distant from the face of the building not less than one and one-half times the height of the sign above the marquee. There shall be a clear space of not less than two (2) feet from the face of the building to any portion of any sign extending more than two (2) feet above the roof of the marquee, unless there is provided a walkway as herein specified. Such walkway shall extend along the face of the building for the full distance between signs, shall be at an elevation of not more than two (2) feet below the top of the sign at the face of the building, and shall be not less than two (2) feet wide. Such walkway shall be designed for its dead load plus a live load of sixty (60) pounds per square foot of area, and shall be of fireproof construction throughout. Where the walkway is located more than two (2) feet above the roof of the marquee, a hand-rail shall be provided along the outer edge of the walkway, and metal stairs or ladder, not less than eighteen (18) inches wide, shall be provided to give access from the walkway to the roof below. Signs extending above the roof of a marquee and placed other than along and flush with the edges thereof, shall be set back not less than two (2) feet from the side edges of the roof. No temporary sign of any kind shall be attached or supported on any marquee, except as provided in Class L. All marquees shall be designed and constructed to sustain, in accordance with the provisions of the building law, their full dead load plus a live load of twenty (20) pounds per square foot of horizontal area, plus the weight of signs, and no sign shall be supported on any marquee which does not satisfy this requirement.

Class L. Temporary signs, advertisements or flags. These may be suspended over the sidewalk in front of buildings or premises upon holidays, election days and days of public parade or display, provided that such signs, advertisements, or flags shall be placed and secured as may be directed by the Board of Public Works

and be removed immediately following the day or days for which the permit is granted.

Class M. Sidewalk clocks, which shall be ornamental in character and construction, the design thereof to be subject to the approval of the Board of Public Works. Such clocks shall be placed just inside of and abutting on the curb line, shall be not less than ten (10) feet above the sidewalk, and the clock face shall be not less than two (2) nor more than three (3) feet in diameter. No advertisement, notice, lettering, inscription or name shall be painted, placed, or attached to the clock or to the pole or standard upon which it is mounted. After the erection thereof, all such clocks shall be maintained in good condition and shall correctly indicate the time; failure to comply with this condition shall be cause for revocation of permit.

Class N. Roof Signs. The extreme height of such signs above the lowest portion of the roof directly beneath the sign shall not exceed seventy-five (75) feet when the sign is supported on a Class A or B building, nor thirty (30) feet when supported on a Class C building. The face of the sign shall be set back of and not less than three (3) feet in the clear from the inside face of the parapet wall parallel or adjacent thereto, and the ends of the sign shall be not less than one (1) foot inside the inside face of the parapet wall adjacent to such end. The bottom of such signs shall be not less than five (5) feet above the roof directly beneath, and the space between vertical support shall be not less than six (6) feet in the clear; not less than fifty (50) per cent of the spaces so defined shall be and remain clear of any obstructions whatever.

No advertising sign or electric sign shall hereafter be placed on any roof in such a position that any portion of the advertising surface, its supporting structure, posts or braces, will be closer than six (6) feet from the outlet connection of any standpipe or fire plug, nor interfere in any way with the free use of any fire escape or obstruct any ventilator, door or stairway.

Any sign of any character, together with its foundation, framework, and supports now or hereafter constructed or maintained on or above any roof shall be

kept in safe repair at all times by the person, firm or corporation, owning, operating or having the care or custody of the same.

All roof signs shall be constructed throughout of fireproof materials, except as hereafter provided, and shall be supported on and attached to the building by a suitable frame of galvanized metal, which shall be positively anchored to the main structural members of the building. Sills, stringers, ornamental trim and foot walks supporting such frames on Class C and frame buildings may be of timber. All foot walks supported by the frame shall be provided with a secure metal railing.

On all electrically illuminated roof signs a disconnect switch shall be installed for the purpose of disconnecting all electrical current from the sign, motor, or other control apparatus on the structure. This switch shall be located within six (6) feet six (6) inches from the roof and be placed either on the supporting structure itself or within easy access and view of the supporting structure.

Section 12. Ordinance No. 1009 N. S. is hereby repealed, as are also any other Ordinances or parts of Ordinances in conflict with the provisions herein.

Section 13. It shall be the duty of the Chief of Police of the City and County of San Francisco strictly to enforce the provisions of this Ordinance.

Section 14. If any section, paragraph, sentence, clause, phrase, table, or portion of any table herein is held to be invalid for any reason, such decision shall not affect the validity of the remaining portion of this Ordinance.

Section 15. Any person, firm, or corporation violating any provision or provisions of this Ordinance shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be punished by a fine not exceeding Five Hundred Dollars (\$500.00), or by imprisonment in the County Jail for not exceeding six (6) month, or by both such fine and imprisonment.

Section 16. This Ordinance shall take effect and be in force thirty (30) days from and after the date of its passage.

Finally Passed—Board of Supervisors, San Francisco, April 6, 1931.

Ayes: Supervisors Andriano, Breyer, Canepa, Colman, Gallagher, Garrity, Havenner, Hayden, McGovern, McSheehy, Peyser, Roncovieri, Spaulding, Stanton.

Absent: Supervisors Miles, Shannon, Suhr.

J. S. DUNNIGAN, Clerk.

Approved, San Francisco, April 10, 1931.

ANGELO J. ROSSI, Mayor.

Bill No. 9531. Ordinance No. 9120 (New Series). An Ordinance Regulating the Sale or Exposure for Sale in the City and County of San Francisco of Any Electrical Material, Device or Appliance Designed for Attachment to or Installation in or on Any Electrical Circuit or System for Light, Heat or Power; Providing That Only Such Materials, Devices or Appliances Shall be Sold, Offered for Sale, or Exposed for Sale Which Are Approved for Sale, Installation and Use in Accordance With the Provisions of This Ordinance; Providing That the Maker's Name, Trademark or Other Identification symbol Shall be Placed Thereon, Together with Appropriate Ratings Necessary to Determine the Purpose for Which Intended, and That Same Shall Not Be Removed, Altered, Changed or Defaced; and Providing for Penalties for the Violation of This Ordinance.

Be it ordained by the People of the City and County of San Francisco as follows:

Section 1. Every person, firm, or corporation, before selling, offering for sale, or exposing for sale an electrical material, device or appliance designed for attachment to or installation in or on any electrical circuit or system for light, heat or power, shall first determine if such material, device or appliance is approved for installation and use in the City and County of San Francisco in accordance with the provisions of this Ordinance; and it shall be unlawful for any person, firm or corporation, or any principal agent or employee thereof, to sell, offer for sale, or expose for sale any such material, device or appliance which does not comply with all of the provisions of this ordinance.

Section 2. All electrical devices or appliances includ-

ing materials used in installation thereof, or in the installation of the necessary wiring for the utilization of electricity for light, heat or power, shall be only those which are approved for the purpose intended, and the maker's name, trade-mark or other identification symbol shall be placed thereon, together with such other markings giving voltage, current, wattage or other appropriate ratings as may be necessary to determine the purpose and use for which intended; and it shall be unlawful for any person, firm or corporation to remove, alter, change or deface the maker's name, trade-mark or other identification symbol, or any of the necessary rating markings required by this Ordinance.

Section 3. The Chief of the Department of Electricity of the City and County of San Francisco is hereby authorized and empowered to enforce all of the provisions of this ordinance, and to make, adopt and promulgate such rules, regulations and specifications as may be necessary or useful in determining conformity of electrical materials, devices and appliances with approved methods of construction for safety to life and property, upon which approval for sale in the City and County of San Francisco shall be based. Conformity of electrical materials, devices and appliances with standards of Underwriters' Laboratories, Inc., as approved by the American Standards Association, and other standards approved by the American Standards Association, shall be prima facie evidence that such electrical materials, devices and appliances comply with the requirements of this ordinance.

Section 4. The Chief of the Department of Electricity may grant "Provisional Approval" of electrical materials, devices or appliances under the following conditions:

A—Where no standard has been prepared or adopted which they should conform.

B—Where no other materials, devices or appliances similar type are regularly listed or approved.

C—Temporary acceptance, in emergency, may be given to materials, devices and appliances not listed by Underwriters' Laboratories, Inc., provided such materials, devices or appliances have been submitted to the laboratories for test and approval. Such temporary



acceptance will ordinarily be granted for a period of 90 days only.

"Provisional Approval" (except where no standard has been prepared or adopted to which they should conform) applies only to the particular sample so "Provisionally approved" and not to the line as manufactured, stored, sold, installed or attached, and shall be granted only for such materials, devices and appliances, which in the opinion of the Chief of the Department of Electricity are reasonably safe.

Section 5. Any person, firm or corporation, or any principal, agent or employee thereof, violating any of the provisions of this Ordinance shall be guilty of a misdemeanor and upon conviction thereof shall be punished by a fine of not more than Three Hundred Dollars (\$300.00), or by imprisonment in the County Jail for a period of not more than ninety (90) days, or by both such fine and imprisonment.

Section 6. If any section, sub-section, sentence, clause or phrase of this Ordinance is, for any reason, held to be unconstitutional, such decision shall not affect the validity of the remaining portions of this Ordinance. The Board of Supervisors of the City and County of San Francisco hereby declares that it would have passed this Ordinance and each section, sub-section, sentence, clause or phrase thereof, irrespective of the fact that any one or more sections, sub-sections, sentences, clauses or phrases be declared unconstitutional.

Section 7. All ordinances or parts of ordinances conflicting with the provisions of this Ordinance are hereby repealed.

Section 8. This Ordinance shall take effect thirty (30) days after its passage and publication.

Finally Passed—Board of Supervisors, San Francisco, December 21, 1931.

Ayes: Supervisors Andriano, Breyer, Canepa, Colman, Gallagher, Garrity, Havenner, Hayden, McSheehy, Miles Peyser, Power, Roncovieri, Shannon, Spaulding, Stanton, Suhr.

Absent: Supervisor McGovern.

J. S. DUNNIGAN, Clerk.

Approved, San Francisco, December 23, 1931.

ANGELO J. ROSSI, Mayor.



# ORDERS

## Department of Electricity

### Section No. 7

### RULES FOR FIXTURES

In order to properly support fixtures as required by Rule No. 1403, National Electrical Code, the following methods shall be observed in order to obtain this department's approval certificate:

1. Fixtures, both wall and ceiling, on new work, shall be supported from the outlet box by means of studs or by metal straps fastened to studs or lugs in the boxes. Special fixtures of a type which cannot be supported except by wood screws may be so installed by special permission.

2. Machine screws shall be used to fasten fixtures to straps to permit inspection of finished work.

3. On old work (that is, fished-in jobs), brackets may be supported by four wood screws of proper length screwed to laths or by metal straps screwed to laths with fixtures attached to straps by machine screws, or by wooden base block (not less than  $\frac{3}{4}$ " thick) securely screwed to lathing.

4. Pans of large diameter may have wood screws fastened to laths in outer edge for the purpose of keeping edge of pan close to ceiling, but not for the support of its weight.

5. All wires for bracket outlets in fished-in jobs shall be brought out between laths, cutting out as little lath as possible and not by boring holes through the lath. Plates shall be securely fastened to the uncut or unbroken laths by wood screws of proper length or by toggle bolts.

6. Where a screw-base lamp receptacle with no fixture attachment is installed, directly in or on an outlet box, conduit or metal-moulding fitting, and where wire of not less than No. 14 gauge is directly connected to same, the fixture fee will be five (\$.05) cents.

7. Insulating joints may be omitted on all fixtures except combination gas and electric, connected to a gas

pipng system, and may be omitted on these if the gas piping system is effectively grounded to the water piping system.

8. Chain type fixtures will be approved in breakfast nooks.

9. In dwellings, flats and apartments, wherever any kitchen, breakfast room, breakfast nook, laundry room, or porch used as laundry, is not provided with a convenience outlet, every lighting fixture installed in any such room or porch shall be wired with not smaller than No. 14 B. & S. Gage wire and every lamp socket installed in such room or porch shall have an approved rating of 660 watts.

10. All fixture studs must be  $\frac{3}{8}$  inch.

#### Section No. 8

#### ELECTRIC PIANOS AND ORGANS

In order to properly safeguard installations of motor-operated pianos and organs, the following requirements shall be complied with:

These requirements apply only to fractional horsepower motors. In larger sizes of motors, or where the addition of a piano or organ motor will impose a load in excess of 1000 watts on the branch circuit, a separate circuit of proper carrying capacity shall be installed in a manner complying with all local requirements.

Reinforced No. 14 portable cord shall be supplied, permanently attached to piano or organ, and fitted with plug for use in plug receptacles. Attachment shall not be made to fixtures or brackets.

A double-pole fuse block enclosed in an approved metal box shall be installed within the piano or organ as near as possible to the motor. Attachment cord shall lead directly into fuse block. No fuse larger than ten amperes shall be used in this block.

Wires from the fuse block to motor shall be encased in metal armor and be as short as possible.

#### Section No. 9

#### ELECTRIC SIGNS

1. All electric signs, both swinging and stationary, including those on marquise, building fronts and roofs,

must comply in every detail with the rules and requirements of the National Electrical Code as given in the "Underwriters' Laboratories Specifications for the Construction and Test of Enclosed Electric Signs," and must have shop inspection before being installed, even if altered for same or moved from other location, or if hung must be lowered to the sidewalk and opened.

2. Shop inspection and certification of approval for signs intended for out-of-town use may be had by filing report indicating such out-of-town use. Such signs shall comply in all particulars with paragraph No. 1 above.

3. Signs constructed elsewhere than in this city may be erected provided each such sign has been inspected and approved in the place of manufacture, either by the Underwriters' Laboratories Inspection Bureaus and is so labeled, or by municipal inspection bureaus where the requirements are similar to those of this city, and who accept shop inspection certificates of this city.

4. Before contractors purchase signs constructed elsewhere inquiry should be made of this Department concerning acceptance of certificates covering such signs.

5. Sign feeds must not be smaller than No. 12 B. & S. Gauge wire, and must be installed in a separate conduit.

6. Troughing must be galvanized and not less than No. 16 Gauge iron.

7. When a sign is installed, the load, and not the circuits, is to be figured a minimum wattage of 25 watts in the body of sign, and 15 watts on borders per socket must be figured.

8. No sign having over 40 sockets or receptacles on a 1000 watt circuit, or 60 sockets or receptacles on a 1500 watt circuit; and 66 sockets or receptacles on a 1000 watt circuit, or 100 sockets or receptacles on a 1500 watt circuit for border lights on sign, will be allowed in this city.

9. Requirements for gas filled tubes used for lighting signs, etc., and other potential devices.

Transformers and Inductive Controllers, when not installed within the sign structure, shall be installed in a weatherproof metal box, said box to be 1 inch

from any combustive material and conform in all respects to N. E. C. rules, but not lighter than No. 24 gauge.

10. Transformers must be of an approved type and submitted to this Department for test and the result of the test will determine the number to be allowed on one circuit, protected by a 15 ampere fuse.

11. Transformers designed for 110 volt primary must not be connected to any single phase system in which the neutral is not grounded, or any system of more than 150 volts to ground.

12. Wires shall be approved for the voltage required. All wires shall be installed in metal raceway of a thickness not less than No. 16 B. & S. Gauge, or in rigid metal conduit. This will not prohibit the running of high potential wires in sign structure, providing 2 inch clearance is maintained between conductors of the low voltage system and high tension wires. No high tension wire shall be smaller than No. 18 B. & S. Gauge.

13. Glass tube elements shall be insulated from ground by approved insulation or not less than  $\frac{1}{2}$  inch of air space.

Electrodes shall be separated from a grounded surface by not less than 1 inch of air space and suitably supported, or be enclosed in an insulating tube approved for the voltage required.

14. Signs shall be so installed that they cannot be reached by an unauthorized person.

15 The metal of all signs and transformers shall be grounded in an approved manner. The ground shall have a capacity equal, at least to No. 10 B. & S. Gauge copper or an approved ground strap. Flexible metal conduit will not be accepted for this ground unless approved grounding devices are used in addition to the terminal fittings required.

16. Interior or exterior signs that are accessible to unauthorized persons must be equipped with a disconnecting device to open the primary circuit operated by the door or shutter or any other portion which is opened to replace fuses, or for other purposes.

17. Attention is particularly called to that portion of

Ordinance 1009, in relation to the compulsory illumination of Class "E" and "F" signs.

18. The contractor for the installation of signs, etc., the same as for any other electrical installation, is responsible for any other electrical work in connection therewith, and it devolves on him to see that all portions of the work from and including service, etc., comply with the provisions of City Ordinances 1009 and 5192, and the National Electric Code Rules, before the installation is made.

19. No more than 15000 volts will be allowed on any tube work in connection with sign on outline lighting installations.

### Section No. 10

#### MOTORS

1. The starting current of straight induction type motors of less than  $\frac{1}{2}$  HP need not be figured in computing load.

2. Straight induction type motors starting without a compensator, the starting current will be figured at 300%, except those with locked rotors or line start which take the same classification as those started with a compensator.

3. All motors other than brush type need not be elevated above floor in garages.

4. On motor, or any other control circuits where the push button is within three feet of the starter, or the circuit fuse protection is less than 45 amperes, it will not be necessary to fuse the control wires. 5 HP 220 volt 2 phase motors need not have the control wires fused.

### Section No. 11

#### METHODS OF INSTALLATION

1. Armored conductors shall not be substituted for concealed knob and tube work. This applies on both old and new work.

2. Where conditions prevent the use of rigid or flexible metallic conduit in walls or ceilings, in alterations, individual extensions or relocations, flexible armored conductors may be installed, provided continuous

lengths only are used between outlet and outlet, and only by special permission.

3. Where exposed flexible metallic conduit is not supported by the building structure, straps shall be placed not more than thirty-two (32) inches apart.

4. Flexible metallic conduit will not be approved in lieu of rigid conduit on new work. This means new construction of buildings, or new constructions or additions to old buildings. The provisions of Section "M" of Ordinance 5192 and of Order 503 of Article 5, on Pages 31, 32 and 33 of the National Electric Code Rules, and 703-3 and 703-4 on Pages 31 to 39 of the State Safety Orders, governing the method of electrical installation, will be strictly enforced.

#### Section No. 12

#### SERVICES AND METERS

1. Owing to the change in wattage limitations per circuit from 660 and 1320 watts to 1000 and 1500 watts, the following is added to Section Z of Ordinance 5192:

In making calculation for the proper size of service or sub-service wires, the following rule shall be observed; in all buildings or other structures, where 20 or less branch lighting circuits are installed, each circuit is assumed to be fully loaded. In all buildings, or other structures where more than 20 lighting circuits are installed the actual connected load shall determine the size of service, or sub-service wires only, but in no case shall the size be less than No. 2 B. & S. Gauge with 100 ampere switch.

NOTE: Plug receptacle or other circuits may be added to the above mentioned lighting load, but in no case shall the size of wire be less than No. 2 B. & S. Gauge for the total combined load.

2. A 2 wire service will be installed for loads of 35 amperes and under. Over 35 amperes a 3 wire service must be installed. The load will be computed on a 115 and 230-volt basis.

3. The grounded conductor of all 2 wire, as well as all 3 wire AC services, must be grounded at the service switch.



4. No service conductors shall be smaller than No. 10 B. & S. Gauge.

5. No service conduit shall be smaller than  $\frac{3}{4}$  inch, and service conduits and fittings, where exposed, must be galvanized.

6. On 3 or 4 wire services an approved service switch with blades and fuses in the ungrounded conductors only, equipped with an approved strap to disconnect the neutral, will be allowed by this Department.

7. Where the load on 2 or more meters will cause an unbalanced condition on the service, the service conductors must be equal in size and of sufficient capacity to carry the largest of the 2 or more loads.

8. All overhead services must be brought to either the extreme front or rear of a building.

9. This Department assumes full authority over all electrical installations within the property line. This refers especially to services regardless of whether they are overhead, underground from an underground source, or underground from an overhead source. The size of the services must comply with rules and regulations of this Department, within the building line.

10. When the construction and conditions of the building will permit, residence meters shall be installed and so located that they are accessible from the outside of the building without entering any locked or otherwise inaccessible portion of the building.

11. The ungrounded legs of all underground services must be lead covered. The grounded leg need not be lead covered, (weatherproof or rubber covered).

12. The State Electrical Safety Order No. 707-10 (g) will be enforced. Said Rule reads as follows:

Safe and convenient means shall be provided so that meters may be readily and safely tested on all services exceeding 150 volts to ground, or where the required size of the meter service switch exceeds 30 amperes regardless of the voltage to ground, without interrupting the service if such interruption of service would be hazardous or impracticable.

Meter test links will be required according to the following switch sizes:

DC.....	60 amperes and up
Singlephase.....	60 to 100 amperes
Polyphase.....	30 to 100 amperes

NOTE: The above does not apply to flats and residences, or on private meters in other buildings where not installed on main meter board.

13. Twenty feet horizontal of unprotected service is the maximum allowed on all buildings.

### Section No. 13

#### OUTLETS AND BRANCH CIRCUITS

1. In dwellings, flats, rooming houses and apartment houses, not more than 12 outlets and not more than 20 medium base lamp sockets shall be connected to any branch circuit supplying current for lighting, and no group of lamps or other devices requiring more than 1000 watts shall be connected to any such circuit. No special permission will be granted for lighting circuits of greater wattage.

2. The minimum total wattage, the minimum number of 1000 watt branch circuits required, and the distribution of outlets on the branch circuits, shall be determined by computing the various outlets as requiring not less than the following minimum wattages: (For certain exceptions, see Sub-section 2-a.)

Ceiling outlets, living rooms.....	250 watts
Ceiling outlets, dining rooms.....	250 watts
Ceiling outlets, libraries.....	150 watts
Ceiling outlets, parlors.....	250 watts
Ceiling outlets, dens.....	100 watts
Ceiling outlets, breakfast rooms.....	100 watts
Ceiling outlets, breakfast nooks.....	50 watts
Ceiling outlets, kitchens with but 1 outlet in center, between kitchens and nooks .....	150 watts
Ceiling outlets, kitchens.....	100 watts
Ceiling outlets, bedrooms.....	100 watts
In all other locations, 50 watts each.	

Above ceiling outlet ratings apply to the first ceiling outlet in the rooms specified. Extra or additional ceiling outlets in the same room may be rated at 50 watts each. In any room which is equipped with bracket outlets only, such outlets shall be rated at and wired for a total wattage at least equal to that required by the above table for ceiling outlet in such room, but in no case for less than 50 watts per outlet. (For example, in a living room with no ceiling outlet, but with two bracket outlets, the two bracket outlets must be rated at not less than 125 watts each).

2-a-1. Exceptions to the above requirements are allowed as follows:

2-a-2. In 3 room apartments one of the rooms used both as living room and bedroom, or both as dining room and bedroom, may be classed as a bedroom, and ceiling outlet in one such room may be rated at a minimum of 100 watts.

2-a-3. In wiring old dwellings, the first ceiling outlet in a living, dining room, or parlor having a floor area of not more than 200 sq. ft. may be rated at a minimum of 150 watts, and each additional ceiling outlet in the same room at 50 watts each.

2-a-4. Division of Load on Circuits: Where two or more circuits are installed, the load carried by such circuits shall be divided among them as nearly equally as is practicable.

3. When lights are installed in clothes closets, they shall be installed on the ceiling or on the wall above the door. Such lights shall be controlled by suitable approved wall, door, or pendant switches or pull chain sockets. No drop cord light shall be installed in any clothes closet.

4. Four inch outlet boxes must be installed for all conduit work and must be equipped with plaster rings with taped ears for finished surface work. Plaster rings will not be necessary on rough or exposed work. All boxes and plates must be equipped with  $\frac{3}{8}$  inch fixture studs; and secured thereto by at least two stove bolts.

5. Where the wiring contractor files a report for fixtures at the same time of filing report for wiring, and

said report states that the fixtures are of such a nature, such as box receptacles or drop cords, fixtures studs may be omitted.

6. Outlets on rear or tradesmen's stairs or landings of apartments, if controlled by switches in tenant's apartments, may be connected to the respective tenants' meters. They will not be considered as emergency lights, and therefore, need not be so installed.

7. In buildings having a store or stores on first floor and flats or apartments above, the circuit limitations will be as follows:

Stores which have no rooms attached, 1000 and 1500 watts. Basements and all portions of buildings used as flats or apartments, 1000 watts.

8. The following sections of Ordinance 5192 are changed to read as follows:

a. Section "K": No group of receptacles exceeding 20 in number or consuming more than 1000 watts shall be dependent on one cut-out, except in the following cases:

b. Paragraph 1 is changed to read as follows: Circuits for decorative lighting and border, foot, proscenium and side lights in theatres and marquee lights may have not more than 20 sockets on 1000 watt and 30 sockets on 1500 watt circuits.

c. In all buildings not more than 12 outlets and no group of lamps or other devices consuming over 1000 watts, and not more than 20 medium base or 40 candelabra base sockets or lamp receptacles, whether grouped on one fixture or on several fixtures or pendants, shall be installed or connected to any such 1000 watt circuit. In all buildings except dwellings, flats, apartments or rooming houses, as same are now or may hereafter be defined in the Building Law of the City and County of San Francisco, not more than 15 outlets, and no group of lamps or other devices consuming over 1500 watts, with not more than 30 medium base sockets or 60 candelabra base sockets or lamp receptacles shall be installed or connected to any such 1500 watt circuit. Where 1500 watt circuits are used, plug receptacles must be installed for every 400 sq. ft. of floor area or fraction thereof. Said floor receptacles must be evenly distributed and on a separate circuit.

d. By special permission in advance where 4000 watt circuits are used, not more than 8 outlets and 8 mogul sockets shall be installed on any such circuit, and subject to and in compliance with, all requirements given in State Safety Order No. 702-1 (d).

e. By special permission obtained in advance where the conditions are such as in theatre aisle lighting, where it is impossible to install lamps of greater capacity than 15 watts, the same number of medium base sockets will be allowed as in candelabra circuits.

9. Each side of a 3 wire circuit can only be used for outlets of the same classification; i. e., either light, plug receptacle, power or heat.

#### Section No. 14

#### PLUG RECEPTACLE CIRCUITS

1. In dwellings, flats, apartment houses and hotels, a total of not more than 8 convenience outlets (receptacles for attachment plugs), and in any building for other uses or occupancies, not more than 4 may be installed on one 2 wire branch circuit, provided all the following requirements are complied with:

2. The nominal voltage of the circuit shall not exceed 250 volts.

3. The conductors of the circuit shall be not smaller than size No. 12 B. & S. Gauge and No. 12 B. & S. Gauge wire shall be carried into each receptacle.

Circuit conductors may be larger than No. 12 if desired or necessary to reduce the voltage drop, but in such cases taps not smaller than No. 12 B. & S. Gauge must be carried into the receptacles.

4. The circuit shall be protected by standard enclosed fuses rated at not more than 20 amperes, on 125 volt and 10 amperes 250 volt circuits.

Size of fuses must not be increased even though wire larger than No. 12 B. & S. Gauge is used.

5. Plug receptacles installed on special convenience outlet circuits shall have an approved rating of not more than 15 amperes and they shall be of approved concealed contact type, so designed and constructed that the plug may be removed without leaving any live parts

exposed to accidental contact. No screw base receptacle shall be used for attachment plugs, and no screw base receptacle shall be installed within 5 feet of the floor.

6. Each duplex receptacle installed on the circuit shall be counted as two receptacles.

7. No lighting fixtures or other equipment except attachment plug receptacles of the above specified type and rating shall be installed on such circuit; provided, however, that switches and pilot lights, or other approved signal or protective devices, may be installed with the individual receptacles if so desired.

8. For the purpose of determining the sizes of services, feeders, and sub-feeders supplying such circuits, the first such circuit shall be figured as requiring not less than 1500 watts and each additional circuit supplied by the same service, feeder or sub-feeder as requiring not less than 1000 watts.

9. When installed in the wood floors of such rooms as dining rooms, living rooms, and libraries of dwellings, flats, and apartments, and when installed in the elevated floors or platforms of show windows in stores, plug receptacles may be installed in the ordinary standard type of flush receptacle box; but such flush receptacles in floor shall be equipped with cover plates with flaps, and of not less than .060 inch metal.

10. Where boxes for floor receptacles are placed in locations where dampness or moisture is prevalent, both boxes and covers must be of a design and approved for such locations. In locations where dampness or moisture may exist only on or above floors, boxes of the standard flush type may be installed, but the plate and cover for the box or floor receptacle must be of such a type and so attached that moisture cannot enter.

As a general rule, receptacles which are installed in wood floors that are varnished, waxed, or carpeted will not be considered as being subject to exposure to moisture.

11. In dwellings, flats, and apartments, if only one outlet is installed within a distance of four feet from an ironing board, such outlet shall be considered as being intended for attachment of an electric iron and



shall be equipped with plug receptacles of the type and rating specified in Paragraph 5 hereof; and if two or more outlets are installed within said distance of four feet from an ironing board, at least one of such outlets shall be equipped with such plug receptacle. In no case shall any outlet be installed inside of any ironing board cabinet.

12. Nothing contained in any section of these rules shall be construed as authorizing or permitting the installation or use of any individual appliance or device consuming over 1000 watts on the same branch circuit with any additional load. Each such individual appliance or device consuming 1000 watts shall be on a separate circuit protected by a separate cutout.

### Section No. 15

#### RETAIL STORES AND INDUSTRIAL BUILDINGS

1. Minimum number of lighting circuits: A sufficient number of lighting circuits shall be installed and uniformly distributed to provide for a minimum of 1 watt per sq. ft. of floor area on the first floor, and any portion of any other floor used as retail stores, salesrooms, display rooms, or offices in any commercial or industrial building, and a minimum of .5 watt per sq. ft. of floor area shall be provided in all other portions of buildings when not used as defined above. Area of mezzanine floors shall be included and wattage computed for same according to purposes for which such mezzanine floor area is used.

a. In addition to the above, circuit capacity shall be provided for exterior lighting and signs actually installed. In all cases sign feeds shall not be smaller than No. 12 wire and the load will be computed at 20 amperes.

b. The above are the minimum requirements. If the actual connected load is in excess of the above requirements, wiring must be installed accordingly.

2. Maximum wattage and number of outlets per circuit.

a. Not more than 10 outlets supplying show window and vestibule lighting only, and not more than 8 outlets supplying both show window and store lighting will be allowed on any 1000 watt circuit.

b. Not more than 15 outlets supplying show window and vestibule lighting only, and not more than 10 outlets supplying both show window and store lighting will be allowed on any 1500 watt circuit, and in all such circuits the following requirements must be complied with.

c. The window lighting outlets shall be equipped with keyless box lamp receptacles. Wire at least equal in size and insulation to No. 14 B. & S. Gauge shall be carried and connected to each lamp receptacle.

d. There shall be installed within the show window an average of not less than one plug receptacle for every 50 sq. ft. or fraction thereof, evenly distributed, of floor or platform area of the window enclosure, and to conform to all rules for plug receptacle circuit.

e. By special permission obtained in advance, departure from the foregoing rules may be authorized, in cases where low wattage lamps are closely spaced for special interior decorative lighting effects.

### Section No. 16

### RANGES AND HEATERS

1. When calculating the size of service in apartments or flats supplying 3 or more ranges, the following diversity factors will be allowed insofar as a range load is concerned:

1 to 2 ranges—Full load.

3 to 6 ranges—Largest range full load, balance 66⅔%.

7 to 10 ranges—Largest range full load, balance 50%.

Over 10 ranges—50% full load.

If the distance between outlet and range does not exceed 6 feet, 1 inch conduit may be used for 3 No. 6 B. & S. wires.

2. HEATERS: For computing the heating load in dwellings, flats and apartments which are separately metered, the largest heater of each circuit to be figured 100% and each heater thereafter at 50%.

3. Where a rooming house or more than one apartment is supplied from one meter, 100% of the largest heater and balance at 75%.

4. It will be compulsory to run No. 8 wire to a 30 ampere receptacle unless the electrical contractor installing the wiring is to install the heater, in which case No. 10 wire and a 30 ampere receptacle may be installed for a heater of 25 amperes or less, but the circuit fuses must not be greater than the capacity of the wiring.

5. Name plate rating in amperes multiplied by 1.075 must govern the size of conductors in large or heavy heating industrial loads.

### Section No. 17

### STATE SAFETY ORDERS

1. Order 702-1 (b) will not apply to motors.

2. Order 702-1 (Y) is optional. The use of so-called identified wire, (white, gray or any other color except black) will not be permitted for use except as a grounded conductor, e. g., it must not be used on a 2 wire 220 volt circuit or a 3 wire, 2 or 3 phase circuit. Single pole fusing, switching and circuiting, together with the use of ungrounded identified conductors is permitted but not compulsory, and cannot be used unless said identified wire and single fusing is used throughout the entire installation from service connections to and including connections to lamp sockets; and provided all rules of the National Electric Code and the Electrical Safety Orders of the Industrial Accident Commission, pertaining thereto, are complied with.

3. Order 707-1 (C) Paragraph 1. This Department will allow the length of unprotected service to be raised from 15 feet to 20 feet on horizontal runs.

4. Paragraph 5 same Order will not be effective in San Francisco.

5. Order 711-5 (i) will not be effective in San Francisco.

6. Order 711-6 (i) to be modified—that the circuit protection of the groupings of motors will not exceed 15 amperes and the total wattage of the circuit does not exceed 1500 watts. Starting current not to be figured.

Two  $\frac{1}{2}$  HP 3 phase motors may be grouped on one circuit and due to the low starting current, DC motors

up to  $\frac{3}{4}$  HP may be grouped subject to the above wattage limitation.

7. Order 713-4 (D) will not be effective in San Francisco.

8. Order 714-1 (B) will not be effective in San Francisco.

9. Order 714-1 (E) The word "Conductors" is interpreted not to mean the flexible cord attached to heater.

10. Paragraph (2) Order 702-1 (c) is changed to the following:

(2) In rooms or other spaces where the outlets on the 1500 watt circuit are located, 1 plug receptacle for each 400 square feet of floor area shall be installed.

### Section No. 18

### MISCELLANEOUS ORDERS

1. The responsibility for the connection of a service to any electrical installation for which no Certificate of Inspection has been issued or permission given by this Department rests on the electrical contractor, and if so proven, said Contractor's Registration is automatically suspended.

2. Switches controlling pantry or porch outlets may be located in kitchen or immediately adjacent to said porch or pantry.

3. Current coils or current transformers will not be approved in raceways except where isolated from feeder or circuit wires.

4. A separate circuit of No. 12 wire must be installed for each oil burner motor, and not less than No. 10 wire for feeder for more than one oil burner motor, but the load on same to be computed at the full load current of the motor or motors, if less than 1 horsepower, single phase.

5. Contractors desiring an inspection or any information regarding a job, either over the telephone or at the office, must give the Permit No. in addition to the street number or street location, and contractor's name. Inspections must be called for at least 12 hours in advance and not later than 4:30 P.M. on week days and 11:30 A.M. on Saturdays.

6. Feeders, sub-feeders or branch circuits running underground may be rubber covered, provided they are protected by the proper size fuse or automatic protection. Varnished cambric conductor will be permitted in lieu of rubber covered in all sizes larger than No. 8, and where no dampness is prevalent.

7. When plug receptacles are installed for radio such receptacles must be of the type used exclusively for radio work, approved lighting or power receptacles will not be permitted for this class of work.

8. In mixed knob and tube and conduit work, all conduit fittings must be accessible.

9. There must be at least 1 inch clearance between any switch or cutout base and conduit or fitting thereon, within the cabinet or cutout box.

10. No switches or plug receptacles will be allowed in the trim or the raceway of any panel board.

11. Section "Y" will be interpreted to allow the omission of a switch in rooms having running water or piping for same unless socket is within 8 feet vertical and 5 feet horizontal of any grounded circuits, excepting kitchens, laundries, bathrooms, or permanently damp places.

12. Single story sidewalk and mezzanine floor elevators will not be considered as coming under Section "L" of Ordinance 5192 (Emergency elevators).

13. On and after September 1, 1928, all wires in basements must be installed in conduit.

14. A slab or panel of non-combustible non-absorptive material, such as slate, soapstone or marble, will not be required as a mounting for up-to-date standard rheostats used for starting only, or for transformers having proper overload protection, provided there is at least one inch of air space between the metal and the mounting.

15. The use of 2 or 3 pole switches with an improvised neutral lug or strap on 3 wire services will not be permitted; an approved switch must be used.

16. On and after September 1, 1928, a separate wall switch must be installed to control lights over ranges or under range hoods.

17. Gutters or raceways must be five times the total area of all wires to be contained therein, and comply to all Sections of State Safety Order No. 703-7.



**Ordinance No. 290. (N. S.) Prescribing the Procedure Under and by Which Municipal Buildings Shall be Constructed and Authorizations made for the Expenditure of Money to Defray the Cost of Such Construction.**

Section 1. Whenever any department of the municipal government deems it necessary that a new building shall be constructed for the use of such department, the Board of Commissioners having the management of such department shall adopt a resolution declaring such necessity and in general terms describe the character of the building required, and state the site upon which the same is to be erected. Such resolution shall be delivered to the Board of Public Works and upon the receipt thereof the said Board of Public Works shall cause to be made an estimate of the probable cost of the building required. When such estimate shall have been made the Board of Public Works shall transmit to the Board of Supervisors a general description of such proposed new building and said estimate of cost, together with a request that said Board of Supervisors appropriate and set aside a sum stated to defray the cost of the preparation of plans and specifications for such proposed new building.

Section 2. Upon the appropriation and authorization for the expenditure of said sum for the preparation of plans and specifications the Board of Public Works shall forthwith proceed to prepare the necessary plans and specifications for such proposed new building, and when the same shall have been completed shall transmit the same to the department for whose use the same is designed. Such department may adopt said plans and specifications or may suggest such changes or modifications as may be deemed proper. Any suggested changes or modifications may be made by the Board of Public Works until such plans and specifications are satisfactory to the department requiring the building, and when so satisfactory, shall be approved.



Section 3. Upon such approval said plans and specifications shall be transmitted to the Board of Supervisors for its approval, and upon such approval being given, the Board of Supervisors shall authorize the expenditure of the sum necessary for the preparation of the detailed plans and drawings and necessary supervision of the work of construction, which (including the cost of the preparation of the contract, plans and specifications) shall not exceed five per centum of the entire cost of the building to be constructed, and shall also authorize the expenditure of the sum necessary for its construction, and authorize the Board of Public Works to enter into a contract for such construction.

Section 4. This Ordinance shall take effect immediately.

## BUSINESS GETTER

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## FIRE ORDINANCES

**ORDINANCE No. 745 (New Series)**—Regulating the Storage and Use of Benzine, Gasoline, or any Product of Petroleum, or any Hydro-Carbon Liquid, Which Will Flash or Emit an Inflammable Vapor Below the Temperature of One Hundred and Ten (110) Degrees Fahrenheit; Stored or Used for Dye Works, Clothes Cleaning Establishments, Cleansing or Renovating Any Article of Wearing Apparel, or Fabric of Any Kind. Repealing Any Portion of Section 3 of Ordinance No. 302, Approved May 24, 1901, in Conflict with This Ordinance.—Approved April 26, 1909.

### Definitions.

Section 1. The term benzine or gasoline wherever used herein shall mean any product of petroleum or any hydro-carbon liquid that will flash or emit an inflammable vapor below the temperature of one hundred and ten (110) degrees Fahrenheit.

A. "Approved" shall mean approved by the Fire Marshal.

B. "Dye Works or Clothes Cleaning Establishments" shall mean any building or premises where more than one (1) quart of benzine or gasoline is kept or stored to be used for cleaning or renovating any clothing or article of wearing apparel, or fabric of any kind.

C. "Tests." The Fire Marshal of the City and County of San Francisco shall test and decide the flashing point.

### Board of Supervisors to Grant Permits.

Section 2. It shall be unlawful for any person, firm or corporation hereafter to establish or maintain a Clothes Cleaning Establishment where more than one (1) quart of benzine or gasoline is kept or stored, without first obtaining a permit therefor from the Board of Supervisors of the City and County of San Francisco, specifying the name of the permittee and the location of the premises to be used as such Clothes Cleaning Establishment, and the amount of benzine or

gasoline desired; provided, however, that the Board of Supervisors in the granting or refusal of such permit shall exercise a reasonable and sound discretion, taking into consideration the character of the applicant and the intended location of such Clothes Cleaning Establishment; and further provided that all persons, firms or corporations now conducting the business of Clothes Cleaning shall after the passage of this Ordinance comply with all of the requirements hereafter specified in this Ordinance governing the storage and use of benzine or gasoline. No permit shall be granted by said Board of Supervisors where any part or portion of a building is used or occupied as a hotel, apartment house or lodging house.

#### **Notices to Be Posted.**

Section 3. When application is made to the Board of Supervisors by any person, firm or corporation to conduct and maintain a Clothes Cleaning Establishment said applicant shall cause to be posted conspicuously on the premises a notice to the effect that application has been made to the Board of Supervisors for the granting of such a permit, said notice to be posted immediately after the filing of the application and to be kept posted until said application is finally granted or denied.

#### **Fire Marshal to Report.**

Section 4. All applications for permits to store benzine or gasoline to be used by Clothes Cleaning Establishments shall, before final action is taken by the Board of Supervisors, be referred to the Fire Marshal for investigation, and to report the conditions necessary to be embodied in the Resolution granting such privilege to the petitioners. Furthermore, said Fire Marshal shall furnish each applicant with a written or printed copy of all the requirements imposed by this Ordinance, for information and guidance as to the manner in which benzine or gasoline shall be stored for cleansing or renovating clothing or any article of wearing apparel, or fabric of any kind, and shall also furnish the Clerk of the Board of Supervisors with a copy of said conditions.

### Section 5.

(a) Not more than ten thousand (10,000) gallons of gasoline in the aggregate shall be allowed to be stored for any one clothes cleaning establishment or dye works and said gasoline shall be stored underground and outside of all buildings in tanks approved by the Fire Marshal. Provided, however, that the quantity of gasoline and the number, size and location of tanks shall be left to the discretion of the Fire Marshal. In determining the amount of gasoline that may be stored, said officer shall exercise reasonable and sound judgment, taking into consideration the capacity of the plant and the number and size of the washers that are to be used, but in no event shall the quantity exceed the maximum of ten thousand (10,000) gallons.

(b) All tanks or other containers, both above and below ground; all continuous flow or other systems for the circulation and use of gasoline, and all pumps, pipings, fittings, sight glasses, valves, traps, emergency dump and other devices used in connection with such storage, circulation and use shall not be installed unless approved by the Fire Marshal.

(c) The operation, structural integrity, condition and placement of all machines, apparatus, appliances, or other devices for use in a clothes cleaning establishment or dye works with, or in any way in connection with, gasoline, shall be approved by the Fire Marshal. (As amended by Ordinance 8536. Passed Sept. 23, 1929.)

Sections 6, 7 and 8 repealed by Ordinance 8536. Passed Sept. 23, 1929.

### Tanks, How Filled.

Section 9. All storage tanks shall be filled from a tank wagon in the day time. In no case shall any tanks or drums of benzine or gasoline, empty or otherwise, be allowed in, upon or about any Clothes Cleaning Establishment or Dye Works.

### Regulations.

Section 10. No open light of any kind shall be allowed in any room where benzine or gasoline is used.

(a) No benzine or gasoline shall be used for motive power to supply any engine or machinery of any kind.

(b) No stove, forge, torch, boiler or furnace, flame or fire shall be allowed in any room where benzine or gasoline is used.

(c) All electric motors shall be placed at least four (4) feet above the floor.

(d) All rooms where benzine or gasoline is used in greater quantities than five (5) gallons shall be of brick, concrete or hollow tile construction, with a system of ventilation with openings to the outer air at floor line, not less than six (6) by eight (8) inches for each ventilator, and the floor thereof shall be of concrete, not less than three (3) inches in thickness. All doors shall be fireproof and all windows shall be of wire glass not less than one-quarter ( $\frac{1}{4}$ ) inch thick, set in metal frames or wood frames covered with galvanized iron.

—As amended by Ordinance No. 5993 (New Series.)

Section 10A. All buildings hereafter erected and all buildings hereafter altered or changed so as to be occupied as a dyeing and cleaning establishment shall be of Class A, B or C construction.—New Section added by Ordinance No. 5251 (New Series.)

#### Duty of the Fire Marshal.

Section 11. It shall be the duty of the Fire Marshal to see that the provisions of this Ordinance are complied with, and for that purpose the Fire Marshal shall have access to any and all buildings used as Clothes Cleaning Establishments or Dye Works during the day time.

If any proprietor or manager of any Clothes Cleaning Establishment or Dye Works shall fail or refuse to comply with any of the provisions of this Ordinance (which are for the public safety), said Fire Marshal shall report the same in writing to the Board of Supervisors; said Board of Supervisors shall notify said proprietor or manager to appear before them and show cause why the permit which may have been granted to store benzine or gasoline, as is provided in Section 2 of this Ordinance, shall not be revoked.

#### Penalty.

Section 12. Any person or persons, firm, company or corporation that violates, disobeys or refuses to comply

with any of the provisions of this Ordinance shall be deemed guilty of a misdemeanor, and, upon conviction shall be punished by a fine not exceeding five hundred (500) dollars, or by imprisonment in the County Jail for not more than six (6) months, or by both such fine and imprisonment; and each such person or persons, firm, company or corporation shall be deemed guilty of a separate offense for every day such violation, disobedience or refusal shall continue, and shall be subject to the penalty imposed by this Ordinance for each and every such separate offense.

### **Repealing All Conflicting Ordinances.**

Section 13. Any and all parts of Section 3 of Ordinance No. 302, approved May 24, 1901, in so far as it may conflict with the provisions of this Ordinance, is hereby repealed.

**Bill No. 9291. Ordinance No. 8802 (New Series). Governing the Handling, Keeping, Storing or Using of Nitrocellulose Material in the Form of a Sheet Film, or Any Other Form, in or upon Any Building or Premises in the City and County of San Francisco.**

Be it ordained by the People of the City and County of San Francisco, as follows:

Section. 1. It shall be unlawful for any person, firm or corporation to hereafter handle, keep, store or use nitro-cellulose material in the form of a sheet film, or any other form, in or upon any building or premises within the limits of the City and County of San Francisco without first obtaining a written permit therefor from the Fire Marshal. All such nitro-cellulose material shall be handled, kept, stored or used upon conditions and under such regulations as may be required by the Fire Marshal. Nothing in this section shall be construed as applying to:

(a) Film for amateur photographic use in original packages of "roll" and "film pack films" when kept or stored in retail establishments for sale to the ultimate consumer or when kept stored or used by a consumer.

(b) Acetate-cellulose material in the form of a sheet film, or any other form.



(c) Motion Picture Film regulated by any other Ordinance.

(d) Dental X-ray film when handled, kept or stored for purposes other than sale.

Section 2. Provided, however, that after the passage of this ordinance, it shall be unlawful for the person or authority in charge of maintaining, operating or conducting any hospital, clinic, dispensary school, college, home, asylum or similar institution, to bring into, expose or develop or allow to be brought into, exposed or developed in or upon any of the above mentioned premises any nitro-cellulose X-ray film. Any such nitro-cellulose X-ray film that may be in or upon any of the above mentioned premises and already exposed and developed at the time this ordinance becomes effective, shall be handled, kept, stored or used upon conditions and under such regulations as may be required by the Fire Marshal, but none shall be handled, kept, stored or used after July 1, 1935.

Section 3. The Fire Marshal shall have power to revoke or suspend any permit granted under the terms of this ordinance for violations of any of its provisions.

Section 4. Any person, firm or corporation who shall violate any of the provisions of this ordinance or fail to comply therewith, or who shall violate or fail to comply with any order or regulation made thereunder, shall be deemed guilty of a misdemeanor and upon conviction thereof shall be punished by a fine not exceeding five hundred (\$500) dollars or by imprisonment in the County Jail for not more than six (6) months, or by both such fine and imprisonment.

Section 5. This Ordinance shall take effect and be in force immediately.

Finally Passed—Board of Supervisors, San Francisco, July 15, 1930.

Ayes: Supervisors Canepa, Colman, Gallagher, Havenner, Hayden, McGovern, McSheehy, Miles, Peyser, Power, Roncovieri, Rossi, Shannon, Spaulding, Stanton, Toner.

Absent: Supervisors Andriano, Suhr.

J. S. DUNNIGAN, Clerk.

Approved, San Francisco, July 17, 1930.

ANGELO J. ROSSI, Acting Mayor.

**BILL NO. 9060. Ordinance No. 8564 (N. S.)—**Governing the construction, equipment, maintenance and operation of public, commercial and private garages; regulating and providing for the storage and use of gasoline in connection with public, commercial and private garages; duties of the fire marshal; penalty for violation; repealing Ordinance No. 746 (N. S.) and all ordinances or parts of ordinances insofar as they conflict with this ordinance.

Be it ordained by the people of the City and County of San Francisco, as follows:

Section 1. Whenever used in this ordinance, the following terms and words are defined as herein specified and shall be deemed and construed to have the meaning ascribed to them in this section:

(a) An "automobile" shall mean any self-propelling vehicle.

(b) "Gasoline" shall mean and include any product of petroleum flashing below the temperature of 110 degrees Fahrenheit. The Fire Marshal of the City and County of San Francisco shall determine such flashing point.

(c) A "commercial garage" is a building wherein four or more automobiles designed used or maintained for the transportation of persons or property and operated by the owner or owners thereof, are kept, stored, repaired and/or serviced, and where no charge is made for the storage, keeping, repairing and servicing of same.

(d) A "public garage" shall mean any building, structure or part thereof, wherein four or more automobiles are kept or stored by the public, or wherein storage facilities for four or more automobiles are advertised by any sign or device affixed to or painted upon said building or structure or any part thereof, or otherwise, or where a charge is made for the storage and keeping of four or more automobiles.

A public garage business may embody the storage, cleaning, repairing and servicing of automobiles, and their equipment, and the storing and selling of gasoline

and petroleum products, automobile supplies and accessories.

In apartment house buildings, and hotel buildings, the above definitions (c), and (d) shall not operate against providing and making a charge for automobile storage space as follows: In apartment house buildings, not exceeding three hundred (300) square feet for each apartment within the building; in hotel buildings, not exceeding one hundred and fifty (150) square feet for each room within the building, provided that the spaces in which automobiles are stored conform with the State Housing Act of 1923 and amendments thereto, and also provided that all enclosures or exterior walls from the foundations to the surface of the floor constituting the ceiling of the garage shall be of masonry as required for class "C" buildings. Said definitions shall not operate against providing and maintaining in apartment house buildings and hotel buildings a greater space than herein defined, provided that when said limitations are exceeded the construction shall be class "A" or "B" as defined in the Building Laws of San Francisco, and provided further, that any apartment house building, or hotel building, wherein four or more automobiles are kept or stored by any person or persons not residing in the building shall be a public garage as herein defined.

In flats or dwellings, the above definitions (c) and (d) shall not operate against providing and maintaining storage space for four or more automobiles provided, that where the space in which automobiles are stored exceeds the area of four hundred fifty (450) square feet, the construction shall conform with the State Housing Act of 1923 and amendments thereto, and provided further, that where such space is maintained in excess of four hundred fifty (450) square feet, no portion of same shall be rented or hired out to any person or persons not residing in the building.

(e) Any other building, structure or part thereof, wherein one or more automobiles are kept or stored, except those establishments which are specifically reg-

ulated by any other ordinances, shall be deemed to be a "private garage." Subdivision "C," "D," and "E" of section 1 amended by ord. 9052, app. August 24, 1931.

### Application for Permit

Sec. 2. (a) It shall be unlawful for any person, firm or corporation to establish, conduct, maintain or operate a public or commercial garage without first obtaining a permit therefor from the Board of Supervisors of the City and County of San Francisco. Every such permit shall contain the name of the person, firm or corporation to whom the same is issued and the location of the premises upon which such public or commercial garage is to be located.

(b) Every application for a permit to establish, conduct, maintain or operate a public or commercial garage shall, before action is taken thereon by the Board of Supervisors, be referred to the Fire Marshal and the Board of Public Works for investigation and report. No such permit shall be granted unless applicant agrees to comply in all respects with the requirements of this ordinance; provided, further, that in the event any person, firm or corporation engaged in the business of a public or commercial garage in a building which in any manner does not conform to the provisions of this ordinance, shall vacate the premises, or discontinue such business, then, and in that event, it shall be unlawful for any person, firm or corporation to subsequently establish, conduct, maintain, or operate the said premises as a public or commercial garage, unless such premises shall be made to comply with all the requirements of this ordinance.

(c) When application is made to the Board of Supervisors by any person, firm or corporation to establish, conduct, maintain or operate a public or commercial garage, said applicant shall cause to be posted conspicuously on the premises intended to be occupied by the public or commercial garage a notice to the effect that application has been made to the Board of Supervisors for such permit. Said notice to be conspicuously posted within twenty-four (24) hours after the filing of the application and shall be kept posted for a

period of not less than seven (7) days. It shall be the duty of the applicant to see or keep said sign conspicuously posted for the said period of seven (7) days.

(d) A permit to establish, conduct, maintain or operate a public or commercial garage is not transferable without the consent of the Board of Supervisors.

(e) No permit shall be granted to conduct, operate or maintain any public or commercial garage within the boundaries of two hundred (200) feet of any school, church, theater, or hospital; said measurement to be taken from the front entrance of said garage to the front entrance of said school, church, theater or hospital; nor shall any permit be issued to hereafter construct, erect, maintain or operate a public or commercial garage within fifty (50) feet of the property line of any school, church, theater or hospital building.

### Construction

Section 3. (a) Every building, structure or part thereof hereafter erected, altered or changed so as to be occupied, conducted, maintained or operated as a public or commercial garage shall be of class "A", "B" or "C" construction (as defined in the Building Laws of the City and County of San Francisco), provided said building or structure is not more than one (1) story in height, and if more than one story in height, it shall be of either class "A" or "B" construction. The roof of such class "C" building or structure shall be of metal supported on steel or timber trusses. The floors of all garages shall be concrete construction or steel frame with concrete construction.

(b) A public or commercial garage shall not be maintained in any building that is occupied in any part for any other purpose than that necessary for the operation of a public or commercial garage, unless said building is of class "A" or "B" construction throughout. The portion occupied as a public or commercial garage shall have no entrance, exit, or other opening of any kind whatsoever into other portions of the building not so occupied, unless said opening or openings are located as required by the Board of Public Works. Such openings shall be protected with a full Underwriter's Auto-



matic Fire Door on inclined tracks with fusible links, or an approved Underwriter's Automatic Rolling Steel Shuttle, fusible links, on both sides of the opening in the wall. Any screen door required in the opening shall be equal to a full kalamein or hollow metal construction. Walls separating such portion occupied as a public or commercial garage and the remainder of the building shall be of brick, stone, or reinforced concrete. The floors which constitute the ceilings of such garage shall be of reinforced concrete slabs, not less than four (4) inches thick, supported by concrete fireproofed carrying units of the frame. These slabs shall be not less than six (6) inches thick, where they constitute the floor of the public assembly room and the ceiling of the garage. All such slabs shall be reinforced so as to develop their full strength to resist upward pressures, and the ceilings of all garages under places of public assembly shall be equipped with an automatic sprinkler system as provided in all ordinances of the City and County of San Francisco in reference thereto.

(c) Every space in a building hereafter erected in which automobiles or other motor vehicles are placed or stored shall be provided with ventilation as follows:

When the total space on any floor to be used for such purposes is 4000 square feet or less, such space shall be provided with ventilation outlets in the walls thereof.

The total areas of such ventilating outlets shall be as follows:

For a space of 1000 square feet or less, 200 square inches. For each additional space of 200 square feet over 1000 square feet this area shall be increased 50 square inches until the total area becomes 525 square inches, which shall be the maximum required for a space of not more than 4000 square feet.

The top of the ventilating outlets shall be not more than 18 inches above the floor. Such outlets shall be protected with galvanized wire rods not less than  $\frac{3}{8}$  inch in diameter so as to provide opening of  $\frac{1}{2}$  inch mesh.

Protections of ornamental design may be used provided they are galvanized and have a strength equal to that of the rods. All protections shall be firmly anchor-



ed in or secured to their supports. All ventilating outlets shall lead directly to a free and unobstructed circulation of air; but shall not lead into inner courts.

All natural ventilating outlets shall be arranged so that there will be at least one outlet in each of two opposite walls of said garage and not less than one-half of the total area of outlets required shall be provided in each of such walls. The free circulation of air between ventilating outlets shall be maintained.

When such space has a floor area of over 4000 square feet a mechanical exhaust ventilation system shall be provided. This system shall consist of power driven exhaust fan or fans of the positive centrifugal type and shall have sufficient capacity to exhaust a quantity of air equal to not less than six times the cubic contents of such space each hour. This mechanical exhaust shall be drawn from a point not more than 18 inches above the floor line and shall be evenly distributed over the entire area in which automobiles are stored. The fan discharge shall be taken to a point above the roof of the building or to the outer air at a point not less than 20 feet from any window in the building or any adjoining building.

(d) An automobile repair shop, tire vulcanizing shop, battery shop and automobile painting shop, may be maintained in a public or commercial garage provided they are separated from the automobile storage section of the public or commercial garage by partitions of concrete, brick or terra cotta tile, which shall extend from the floor to the ceiling, or floor to the roof above; provided, however, that no battery shop or automobile painting shop shall be maintained in any public or commercial garage located under a place of public assembly or basement of any building occupied by a public or commercial garage. All openings in said partitions shall be located as directed by the Board of Public Works and the protection to such openings shall consist of an approved Underwriter's Automatic Fire Door on inclined tracks with fusible links or an approved Underwriter's Automatic Rolling Steel Shutter with fusible links, in addition to the temporary protection for opening or closing, which must be constructed of

plates and angles, and if glazed, wire glass only shall be used. All such shops shall be conducted, maintained and operated as required by all ordinances governing such establishments.

(e) All private garages with a floor area in excess of four hundred (400) square feet shall be constructed as provided in this ordinance for public or commercial garages, if built independent of any other building. Detached private garages having four hundred (400) square feet or less floor area shall not have a height of more than sixteen (16) feet from the floor to the highest point of the roof, and they may be built with timber or steel frames which shall be covered with not less than three-quarter ( $\frac{3}{4}$ ) inch timber sheathing or number twenty-six (26) gauge corrugated metal, and have their roof covered with fire proof roofing material. They shall rest on continuous masonry foundations and have masonry floors, and shall have ventilating openings as specified in paragraph (c), Section 3, of this ordinance.

Not more than one detached private garage building of frame construction shall be built, maintained or operated on any single lot, and shall only be used for private garage purposes. Subdivision "E" of section 3 amended by Ord. 9052 (N. S.), app. August 24, 1931.

#### Storage of Gasoline

Section 4. Whenever the word "approved" shall hereafter appear in this ordinance, it shall mean approved by the Fire Marshal.

(a) Permission must be received from the Fire Marshal before storing or keeping gasoline in or for any public or commercial garage, but in no event shall the quantity exceed the maximum prescribed in this section.

(b) Not more than one approved five (5) gallon can of gasoline and approved portable filling tanks containing not more than fifty (50) gallons of gasoline each may be stored or kept inside of any public or commercial garage, except such gasoline which is contained in the reservoir of automobiles stored therein. Not more than one (1) approved portable filling tank shall be allowed on any one floor of a public or commercial garage.

(c) Additional gasoline may be stored or kept for a public or commercial garage in approved tanks, outside the walls of the building and buried underground. Not more than four (4) tanks containing not more than five hundred fifty (550) gallons of gasoline each, making twenty-two hundred (2200) gals. in the aggregate, shall be allowed to be stored or kept for any one public or commercial garage. All such tanks shall be constructed of galvanized steel at least number (12) gauge in thickness or iron not less than three-sixteenths (3-16) of an inch in thickness. All tanks shall be coated on the outside with tar or other suitable rust resisting compound.

The Fire Marshal may grant permission to store or keep gasoline in excess of the above limitations, if in his judgment the additional gasoline is deemed necessary, but such additional gasoline shall be stored or kept only upon conditions and under such regulations as may be required by said Fire Marshal.

(d) A permit shall be required from the Fire Marshal to store or keep gasoline in excess of five (5) gallons in or for any private garage. The Fire Marshal shall determine the amount of gasoline, if any, that may be stored, but in no event shall the quantity exceed the maximum allowed for a public or commercial garage. Said gasoline shall be stored or kept as required for a public or commercial garage.

### **Tanks, Pipes and Pumps**

Section 5. All underground gasoline storage tanks, pipes and appurtenances used in connection with a public, commercial or private garage shall be installed as follows, unless otherwise required by the Fire Marshal.

(a) All underground tanks shall be placed outside the building, under the sidewalk, close to the curb line.

(b) The top of each such tank shall be at least four feet below the sidewalk and the space between the top of the tank and sidewalk shall be filled with earth.

(c) No such tank shall be connected with another so that gasoline can flow or be pumped from one underground tank to another.

(d) All such tanks shall set on a firm foundation and, where water is encountered, tanks shall be enclosed in an approved watertight reinforced concrete vault.

(e) Where two or more tanks are installed, there shall be an approved brick or concrete dividing wall between each tank not less than twelve (12) inches in thickness or three (3) feet of earth.

(f) Each tank shall have a separate filling pipe extending up to the sidewalk or grade, capped with a screw cap, which must be screwed up tight at all times except when filling, and shall be covered with a metal plate flush with the sidewalk or grade.

(g) Each such tank shall have a separate one (1) inch vent pipe extending out of the top of the tank to a height of not less than twelve (12) feet and capped with a double return bend equipped with a non-corrodible wire screen of thirty (30) mesh. The lower end of vent pipe shall not extend through the top into the tank for a distance of more than one (1) inch. Vent pipe shall be on the outside of the building and terminate not less than three (3) feet, measured horizontally and vertically, from any window or other building opening.

(h) Each such tank shall have at least one suction pipe. Two or more tanks may be connected with one pump, provided the suction pipes siamese at the pump with valves to close each suction pipe.

(i) All pipes shall lead out of the extreme top of each tank; and shall be at least twelve (12) inches underground or enclosed in concrete. Said pipes shall have a fall toward the tank.

(j) All pipes and fittings shall be standard, full weight galvanized iron, or equivalent, and shall be put together with litharage and glycerine.

(k) Tanks and pipes shall not be covered until an inspection has been made by the Fire Marshal and permission to do so has been granted by said officer. The Fire Marshal shall be notified when the work is ready for inspection.

(l) Gasoline shall be taken from such tanks only by means of an approved pump, which shall be installed in

an approved location, not below the first floor. No gravity, siphon or pressure system shall be used for taking gasoline from any tank.

(m) The Fire Marshal shall have the right at any time to take, or demand to be taken, a test for leaks on any tank, pipes or appurtenances, and, if found to be defective, shall demand that they be repaired or replaced.

### Safety Regulations

Section 6. The following safety regulations shall govern the operation and maintenance of public, commercial and private garages.

(a) Each underground tank shall be filled with gasoline only through pipe or hose connected to a tank truck, leading through continuous metal fittings or connections, properly grounded to and into the filling pipe of such underground tank.

(b) The reservoir of an automobile shall be filled with gasoline only through an approved hose connected to a pump on a portable filling tank or underground tank.

(c) Wherever possible, portable filling tanks shall always be kept near the entrance of garage when not in use.

(d) No gasoline shall be allowed to be kept or conveyed in open receptacles inside a garage.

(e) No smoking shall be allowed inside of any garage and notices to that effect shall be conspicuously posted as required by the Fire Marshal.

(f) All inflammable waste and rubbish shall be kept at all times in metal receptacles fitted with a tight cover until removed from the premises.

(g) Sawdust shall not be kept and sawdust or other flammable material shall not be used for the purpose of absorbing oil, grease or gasoline. Oil and grease shall not be allowed to accumulate on the floor of any garage. Gasoline shall not be used for cleaning the engine of any automobile.

(h) All lights on an automobile shall be extinguished before filling reservoir with gasoline and the engine of said automobile shall not be in motion.



(i) No gasoline, grease, oil or flammable liquids of any kind shall be allowed to flow or be placed into the drainage system.

(j) No tank truck, empty or otherwise, used for the transportation of flammable liquids shall be admitted inside any garage, unless the garage is used exclusively for the keeping of such vehicles.

(k) The heating of any garage shall be accomplished only by an approved steam or hot water system.

(l) Gasoline shall not be kept or stored below the first floor of any garage, except that which is contained in the reservoirs of automobiles stored therein.

(m) No system of artificial lighting other than incandescent electric lamps shall be installed. All portable lights shall be equipped with keyless sockets and lamp guards. All electric switches, sockets and plugs shall be at least four feet above the floor. All electric wiring shall be installed as required by the Department of Electricity.

(n) All electric motors or devices capable of emitting an exposed spark shall be located at least four feet above the floor.

(o) All lockers shall be constructed entirely of incombustible material and no gasoline, oils or other flammable liquid shall be kept therein.

(p) At least one (1) approved fire extinguisher containing not less than two and one-half ( $2\frac{1}{2}$ ) gallons of chemical, if of the soda and acid or foam type, or not less than one quart if of the carbon tetra-chloride type, shall be provided for every one thousand (1000) square feet of the floor area or fraction thereof, which shall be installed and located as required by the Fire Marshal. Not more than one-half of the total number of such fire extinguishers may be of the carbon tetra-chloride type. All extinguishers of the carbon tetra-chloride type must be kept filled with the proper fluid at all times. All extinguishers of the soda and acid or foam type must be properly recharged not less than once each year and date of such recharging shown on the tag attached thereto. Near each such fire extinguisher there shall be maintained an approved bucket of clean dry sand. In addition to the buckets of sand, every public and commercial garage shall maintain on



each floor, an approved barrel of clean dry sand. All of the above containers of sand shall have painted thereon in an approved manner, the words: "Sand—For Fire use."

(q) No stove, forge, torch, furnace, heating apparatus, flame, fire or other apparatus, device or equipment which the Fire Marshal shall deem to be hazardous, shall be maintained or kept unless approved by the Fire Marshal.

(r) All automobiles shall be spaced in an approved manner so as to allow members of the Fire Department or other persons to easily reach any automobile or any part of the premises in case of fire.

(s) No portion of any garage shall be used for the storage or keeping of goods, merchandise or any flammable material, except the necessary automobile parts, accessories and supplies.

(t) All waste oil (crankcase drainings) shall be kept in an approved tank, buried underground as required by the Fire Marshal. No such oil shall be kept in cans or drums above ground.

### **Duties of Fire Marshal**

Section 7 (a) It shall be the duty of the Fire Marshal of the City and County of San Francisco to see that the provisions of this ordinance are complied with, except the supervision of building construction and alteration, and for that purpose shall have access at all times to any and all public, commercial and private garages.

(b) In the event that any person, firm or corporation to whom a permit has been granted by the Board of Supervisors to establish, conduct, maintain or operate a public or commercial garage shall violate, cause or permit to be violated any of the provisions of this ordinance (which are for the public safety), it shall be the duty of the Fire Marshal to notify said person, firm or corporation in writing to appear before the Board of Supervisors of the City and County of San Francisco within five (5) days after the service of said notice to then and there show cause why the permit which has been granted to establish, conduct, maintain or operate a public or commercial garage shall not be revoked.

(c) If the said person, firm or corporation on whom said notice was served by the Fire Marshal to appear before the Board of Supervisors fails or refuses to appear before the said Board of Supervisors it shall be the duty of the said Board of Supervisors to notify in writing said person, firm or corporation to whom a permit has been issued that said permit, through failure or neglect to appear before the Board of Supervisors, is revoked. Said person, firm or corporation on whom notice was served by the Fire Marshal and who failed, refused or neglected to appear before said Board of Supervisors, is hereafter liable to the penalty imposed by this ordinance, if said person, firm or corporation shall continue to conduct, maintain or operate such public or commercial garage after being notified in writing that the permit issued by the Board of Supervisors has been revoked.

(d) The Fire Marshal shall have the right to revoke any permit that has been issued for the storage of gasoline for violation of any of the provisions of this ordinance.

### Penalty

Section 8. When any person, firm or corporation violates or refuses to comply with any of the provisions of this ordinance (which are for the public safety) said person, firm or corporation shall be deemed guilty of a misdemeanor and upon conviction shall be punished by a fine not exceeding five hundred (\$500) dollars, or by imprisonment in the County Jail for not more than six months, or by both such fine and imprisonment. Each such person, firm or corporation shall be deemed guilty of a separate offense for each day such violation shall continue and shall be subject to the penalty imposed by this ordinance for each and every such separate offense.

Section 9. Ordinance No. 746 (New Series) and all ordinances or parts of ordinances in so far as they conflict with this ordinance are hereby repealed.

Section 10. This ordinance shall take effect immediately.

Finally Passed—Board of Supervisors, San Francisco, October 7, 1929.

### Supply Stations.

**Ordinance No. 2659. (N. S.)** Regulating the construction and use of buildings to be used as automobile supply stations; regulating and providing for the storage and use of gasoline in connection therewith.

**Section 1. "Definition."**—The following terms shall have the following meaning whenever used in this Ordinance.

(a) "Automobile Supply Station" is a building of not more than one (1) story in height; not more than twenty-five (25) feet wide, twenty-five (25) feet long and not more than seventeen (17) feet high from the ground level. The flooring of all automobile supply stations shall be of concrete or earth, devoted wholly for the purpose of furnishing gasoline, lubricating oils and automobile supplies. All roofing shall be of fire-proof material.

(b) "Gasoline" shall mean any product of petroleum or any hydro-carbon liquid that will flash or emit an inflammable vapor below the temperature of one hundred and ten (110) degrees Fahrenheit. The Fire Marshal decide the flashing point.

(c) "Fire Marshal" shall mean the Fire Marshal of the City and County of San Francisco.

(d) "Approved" means approved by the Fire Marshal.

**Section 2. "Permits."**—It shall be unlawful for any person, firm, company or corporation hereafter to establish, conduct, operate or maintain an automobile supply station within the limits of the City and County of San Francisco, where more than one (1) quart of gasoline is stored or kept without first obtaining a permit therefor from the Board of Supervisors.

All applications to establish, conduct, operate or maintain an automobile supply station where more than one (1) quart of gasoline is to be stored or kept shall be made to the Board of Supervisors specifying the name of the permittee, the location of the premises to be used as an auto supply station, together with the amount of gasoline desired to be stored.

The Board of Supervisors shall grant and issue said permit, provided the applicant agrees to abide by and

to comply with all the rules, regulations, requirements and provisions of this Ordinance; provided, however, the Board of Supervisors shall refuse the permit if in the judgment of the Board an automobile supply station at the proposed location would be particularly hazardous to the public safety; provided, further, the Board of Supervisors shall not grant or issue any permit to conduct, operate or maintain an automobile supply station within the boundaries of two hundred (200) feet of any school, church, theater or hospital; said measurement to be taken from the front entrance of the automobile supply station to the front entrance of said school, church, theater or hospital.

Where no more than one (1) quart of gasoline is stored or kept a permit from the Board of Supervisors to conduct, operate and maintain an automobile supply station shall not be required.

**Section 3. "Construction of Buildings Used as Automobile Supply Stations."**—All buildings hereafter erected and all buildings hereafter altered or changed so as to be occupied as automobile supply stations, shall be of Class "A," Class "B" or Class "C" construction, with concrete or earth floors.

No automobile supply station shall exceed the following dimensions: Not more than one (1) story in height; not more than twenty-five (25) feet wide and twenty-five (25) feet long and not more than seventeen (17) feet high from the ground level.

No basement shall be allowed in any automobile supply station.

Automobile supply stations shall be devoted wholly to the sale of gasoline, lubricating oils and automobile supplies.

**Section 4. "Fire Protection for Automobile Supply Stations."**—There shall be at all times maintained in, at, or near the entrance to every automobile supply station at a place or places designated by the Fire Marshal for the extinguishment of fires, not less than two (2) three-gallon chemical fire extinguishers or other fire extinguishers which have been approved by the Fire Marshal, one (1) barrel and two (2) iron buckets full at all times of clean dry sand; said barrel to con-

tain at all times an iron scoop so that the sand may be readily thrown on gasoline or oil fires. Sand must also be used for absorbing waste oils that may fall upon the floor; such sand when saturated shall be removed from the premises.

The use of sawdust for absorbing gasoline or oils on the floor of any automobile supply station is strictly prohibited.

Section 5. "Storage of Gasoline."—Except as herein-after provided in this Ordinance, all gasoline shall be stored in underground tanks, not to exceed the following capacity and amounts: No gasoline or any other product of petroleum or hydro-carbon liquid that will flash or emit an inflammable vapor below the temperature of one hundred and ten (110) degrees Fahrenheit, shall be allowed inside the building of an automobile supply station; provided, however, gasoline may be kept above ground in approved, portable filling-wheel tanks. No one approved, portable filling-wheel tank shall have a capacity of more than fifty (50) gallons. Not more than two (2) approved, portable filling-wheel tanks shall be allowed for any one automobile supply station.

All said approved, portable filling-wheel tanks shall be mounted on all metal wheels with rubber tires, each to be equipped with an approved pump, fitted with hose attachment not to exceed eight (8) feet in length, fitted with a ground shut-off nozzle.

All portable filling-wheel tanks when not in use shall be kept near the entrance of the automobile supply station so that in case of fire they can be readily removed from the building.

No one (1) storage tank shall have a capacity greater than five hundred (500) gallons.

Not more than four (4) tanks of five hundred (500) gallons capacity each of an aggregate total amount of two thousand (2000) gallons of gasoline shall be stored in connection with any one (1) automobile supply station.

Said storage tank or tanks shall be constructed and installed as herein provided. (As amended by Ordinance No. 5689.)



**Section 6. "Construction of Storage Tanks."**—All storage tanks must conform to the following specifications:

All storage tanks shall be constructed of not less than No. 12 U. S. Standard Gauge, galvanized steel, oxy-acetylene or electric welded, or riveted steel to steel joints, with rivets not more than one inch apart from centers; soldered and coated with tar or other rust-resisting material. Storage tanks may also be constructed of iron, not less than three-sixteenths of an inch in thickness, riveted and caulked-coated with tar or other rust-resisting material.

There shall be no openings or connections on any storage tank except on the top thereof; no tank shall be connected either directly or indirectly with any drain, catch basin, public or private sewer.

The openings on the top of a storage tank shall consist of one filling pipe, one suction pipe, and one vent pipe.

All storage tanks must be approved by the Fire Marshal.

**Section 7. "Installation of Gasoline Storage Tanks."**—All gasoline storage tanks shall be installed in the following manner.

A. All storage tanks must be placed outside of the building, under sidewalk, in a spot agreed upon between the applicant and the Fire Marshal, as near the curb as possible. The top of said storage tank or tanks shall be at least four (4) feet below the ground level. The space between the top of the tank or tanks shall be filled with earth.

B. Where two (2) or more tanks are installed, there shall be a brick or concrete dividing wall between each tank, not less than twelve (12) inches in thickness, or three (3) feet of earth.

C. No storage tank shall in any manner be connected to another storage tank; each tank must have separate filling pipe, suction pipe and vent pipe. All pipes must be galvanized, and shall come out of the top of the tank or tanks, and put together with litharge and glycerine.



D. All storage tanks shall be provided with one (1) inch diameter vent pipe. Said vent pipe must extend up at least twelve (12) feet above the ground level, upon the outside of the building, attached to the wall with pipe hooks, and shall be capped at the top with a return bend, the opening of which shall be covered with a brass or copper wire mesh of at least thirty (30) mesh.

E. All storage tanks shall be filled from a tank wagon, between the hours of sunrise and sunset.

In no case shall any storage tank or tanks be filled from drums or barrels. No drum or barrel of gasoline, empty or otherwise, shall be allowed in, upon or about any automobile supply station.

F. No storage tank shall be covered with earth until inspection has been made or permission has been granted to do so by the Fire Marshal. The applicants shall notify the Fire Marshal when the tank or tanks are ready for inspection.

G. All filling pipes shall extend up to the sidewalk, capped with a water-tight screw cap, securely locked.

Section 8. **"Pumps."**—All storage tanks shall be connected with an automatic "closing valve pump," which may be located in or outside of the automobile supply station.

All gasoline must be pumped from the storage tank or tanks. No gravity, syphon or pressure shall ever be used for taking gasoline from the storage tank or tanks.

Storage tanks may be connected with one pump, provided the suction pipes siamese at the pump with valves to close on all suction pipes.

Gasoline shall not be carried in open cans, or used to fill automobile reservoirs or containers. If cans are required they must be of an approved design.

Section 9. **"Automobile Supply Station Regulations."**—The owner, permittee, lessee, manager or superintendent of an automobile supply station shall be held responsible for any violations of the following regulations, which are for the public safety:

A. No automobile shall be allowed to be stored or remain upon the premises of an automobile supply station, except while filling.

B. No automobile shall be allowed to be repaired or cleaned upon the premises of an automobile supply station.

C. No gasoline shall be allowed to remain above ground, except in approved portable filling-wheel tanks, as is provided for in Section 5 of this Ordinance.

D. Smoking shall not be allowed inside of an automobile supply station, or near an automobile which is being filled with gasoline. A notice "NO SMOKING" in letters of not less than three (3) inches shall be displayed in a conspicuous place and manner.

E. All waste, rags and rubbish of any kind shall be kept at all times in metal receptacles, fitted with a tight cover and shall be removed every day.

F. No gasoline shall be put in or taken out of the reservoir of an automobile where there is an open light. All lamps on automobiles must be extinguished before filling automobile reservoirs with gasoline.

G. No open light shall be allowed in any automobile supply station. Electricity only shall be used for illuminating purposes in any automobile supply station.

H. No stove, forge, torch or other furnace, flame or fire shall be allowed in, upon or about an automobile supply station.

I. The floor and premises of an automobile supply station must be kept clean and free from oil or rubbish.

J. All machinery of an automobile must be shut off and the automobile dead, while gasoline is being poured into the reservoir or container of the automobile.

Section 10. "Duties of the Fire Marshal."—It shall be the duty of the Fire Marshal to see that the provisions of this Ordinance are complied with, and for that purpose shall have access to any and all buildings or premises used as an automobile supply station.

In the event that any person, firm, company, corporation or permittee to whom a permit has been granted by the Board of Supervisors to conduct, operate or maintain an automobile supply station, shall violate, cause or permit to be violated any of the provisions of this Ordinance (which are for the public safety) or

shall conduct, operate or maintain or carry on the same in an unlawful or dangerous manner, it shall be the duty of the Fire Marshal to notify said person, firm, company, corporation, or permittee in writing to appear before the Board of Supervisors of the City and County of San Francisco, within five days after the service of said notice, to then and there show cause why the permit which has been granted to conduct, operate or maintain an automobile supply station, and to store gasoline as provided in this Ordinance, shall not be revoked.

If the said person, firm, company, corporation or permittee on whom said notice was served by the Fire Marshal to appear before the Board of Supervisors, fails, disobeys or refuses to appear before the said Board of Supervisors, it shall be the duty of said Board of Supervisors, in addition to the penalty provided in this Ordinance, to notify in writing said person, firm, company, corporation or permittee to whom a permit has been issued by the Board of Supervisors to conduct, operate or maintain an automobile supply station, that said permit, through failure and neglect to appear before the Board of Supervisors, is revoked. Said person, firm, company, corporation or permittee, on whom notice was served by the Fire Marshal to appear before the Board of Supervisors, and who failed, refused and neglected to appear before said Board of Supervisors, is hereafter liable to the penalty imposed by this Ordinance, if said person, firm, company, corporation or permittee shall continue to conduct, operate or maintain an automobile supply station after being notified in writing that the permit issued by the Board of Supervisors has been revoked.

Section 11. This Ordinance shall not repeal, alter nor amend any existing Ordinance.

Section 12. **Penalty.**—Any person, firm, company or corporation that violates, disobeys or refuses to comply with any of the provisions of this Ordinance shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not less than ten dollars nor more than fifty dollars, or by imprisonment in the County Jail for not more than thirty days, or by both such fine and imprisonment, and such person, firm

company or corporation shall be deemed guilty of a separate offense for each and every day that such violation, disobedience or refusal shall continue and shall be subject to the penalty imposed by this Ordinance for each and every separate offense.

**Ordinance No. 5691. (N. S.) Regulating the Sale of any Oil represented as a Lubricating Oil for the cylinders of Internal Combustion Engines.**

Section 1. It shall be unlawful for any person, firm or corporation to sell, offer for sale or deliver, or to cause or permit to be sold, offered for sale or delivered in the City and County of San Francisco, any oil represented as lubricating oil for the cylinders of internal combustion engines unless there shall be firmly attached or painted at or near the point of outlet from which said oil represented as lubricating oil for the cylinders of internal combustion engines is drawn or poured out for sale or delivery, a sign or label consisting of the word or words in letters not less than one (1) inch in height, comprising the brand or trade name of said lubricating oil; provided that when said sign or label is attached to the faucet or valve of a tank-truck or tank-wagon, the letters shall be not less than  $\frac{3}{4}$  inch in height, and provided that if the above required sign or label is on a container having a capacity of fifteen (15) gallons or less, the letters shall be not less than  $\frac{1}{2}$  inch in height, and provided that if any of said lubricating oil shall have no brand or trade name, the above required sign or label shall consist of the words, in letters not less than three (3) inches high, with the exception above provided, "Lubricating oil, no brand."

Section 2. It shall be unlawful for any person, firm or corporation to display any sign, label or other designating mark which describes any petroleum oil or petroleum product not actually sold or offered for sale or delivery at the location at which the sign or other designating mark is displayed or to display any label upon any container, which label, names or describes a petroleum product not actually contained therein, but offered for sale or sold as such.

**Section 3.** Any person, firm or corporation violating any of the provisions of this Ordinance shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not more than five hundred (500) dollars or by imprisonment in the county jail for a period of not more than six (6) months, or by both such fine and imprisonment.

**Section 4.** Each such person, firm or corporation shall be deemed guilty of a separate offense for every day during any portion of which any violation of any provision of this Ordinance is committed, continued or permitted by such person, firm or corporation, and shall be punishable therefor as provided by this Ordinance.

**Ordinance No. 5688. (N. S.) Regulating the sale of Gasoline and providing for the exhibition of disks indicating the name or trade mark of the manufacturer of such Gasoline.**

**Section 1.** It shall be unlawful for any person, firm or corporation to sell gasoline manufactured by any other person, firm or corporation from any tank, barrel, drum or other movable or stationary container unless there is securely fastened to each pump attached to such container, in such manner as to be plainly visible to any person purchasing such gasoline, a metal disk not less than twelve (12) inches in diameter bearing in letters not less than one inch in height the name and/or the trade mark of the manufacturer of such gasoline.

**Section 2.** Any person, firm or corporation violating any provision of this Ordinance shall be deemed guilty of a misdemeanor and upon conviction thereof shall be punished by a fine not exceeding three hundred (300) dollars or by imprisonment in the county jail for not more than one month, or by both such fine and imprisonment.

**Ordinance No. 302. Providing for the Regulation and Controlling of the Storage of Crude Petroleum, Use of Crude Petroleum, Storage of Any of the Products of Petroleum; Use of Gasoline; Storage of Kerosene**



or Coal Oil; Adulterations of Oils Prohibited; Cases and Packages of Heating or Illuminating Oils to be Stamped; Test of Oils and Instruments to be Used. Refining Oils; Storage of Explosives; Prohibiting the Transportation of Nitro-Glycerine; Storage of Gunpowder; Conveyance of Gunpowder; Gunpowder Shipping; Discharging and Having Gunpowder on Board; Gunpowder When Loaded to be Immediately Forwarded; Vessels Having Gunpowder on Board to be Afloat at Low Tide; Storage and Sale of Fireworks; Duty of the Police; Transportation of Calcium Carbide; Liquefied Acetylene; Duty of the Fire Marshall; Erection of Gas Works or Gas Machines; Gas Engines. Arson—Reward for Arrest of. Rubbish, Shavings; Hay, Straw or Litter. Gas and Electric Lights in Show Windows. Ashes; Fire in Open Tins, Cans, Etc. Manufacture of Matches. Enforcement of the Provisions of This Ordinance; This Ordinance to Take Effect.

### STORAGE OF CRUDE PETROLEUM

Section 1. No person or persons, firm, company or corporation shall keep, store or permit the storage of, within the limits of the City and County of San Francisco, any crude petroleum, in larger quantities than fifty gallons, to be always kept in metal cans or iron tanks, except within those portions of the City and County of San Francisco bounded and described as follows, to-wit:

Commencing at the intersection of the shore line of the Bay of San Francisco with the northerly and easterly end of Channel street; running thence in a southwesterly direction along the center line of Channel street to its intersection with the center line of Division street; thence in a westerly direction along the center line of Division street to the center line of Potrero avenue; thence in a southerly direction along the center line of Potrero avenue to its intersection with the center line of Fifteenth street; thence in an easterly direction along the center line of Fifteenth street to its intersection with the center line of De Haro street; thence



in a southerly direction along the center line of De Haro street to its intersection with the center line of Sixteenth street; thence in an easterly direction along the center line of Sixteenth street to its intersection with the center line of Mississippi street; thence in a southerly direction along the center line of Mississippi street to its intersection with the center line of Mariposa street; thence in an easterly direction along the center line of Mariposa street to its intersection with the center line of Iowa street; thence in a southerly direction along the center line of Iowa street to its intersection with the center line of Army street; thence in a westerly direction along the center line of Army street to its intersection with the center line of San Bruno avenue; thence in a southerly direction along the center line of San Bruno avenue to its intersection with the center line of Oakdale avenue; thence in an easterly direction along the center line of Oakdale avenue to its intersection with the center line of Oakdale avenue to its intersection with the center line of Third street to its intersection with the center line of San Bruno avenue; thence in a southerly direction along the center line of San Bruno avenue to the County Line of San Francisco; thence in an easterly direction following the County Line of San Francisco to its intersection with the Bay of San Francisco; thence in a northerly and northwesterly direction following the line of the waterfront to the point of commencement.

Commencing at the point of intersection of the northerly line of Beach street with the westerly line of Jones street; running thence northerly along the said westerly line of Jones street to the southerly line of Jefferson street; thence westerly along the said southerly line of Jefferson street to the easterly line of Leavenworth street; thence southerly along the said easterly line of Leavenworth street to the northerly line of Beach street; thence easterly along the said northerly line of Beach street to the westerly line of Jones street and the point of commencement, being all of 50 Vara Block Number 230.

Commencing at the point of intersection of the east-

erly line of Leavenworth street with the northerly line of Jefferson street; running thence easterly along said northerly line of Jefferson street to the westerly line of Jones street; thence northerly along the said westerly line of Jones street to the shore line of the Bay of San Francisco; thence westerly along said shore line to the easterly line of Leavenworth street; thence southerly along said easterly line of Leavenworth street to the point of commencement.

All crude petroleum kept or stored within the above described limits shall be stored in steel tanks; the thickness of the plates used in construction of said tanks shall be in accordance with the requirements of the Fire Marshal.

All storage tanks shall be inclosed by a solid brick or reinforced concrete wall, capable of retaining the contents of the tank; there shall be no opening of any kind in said walls; said walls shall be of such construction, height and thickness as the Fire Marshal shall prescribe.

All storage tanks hereafter constructed shall be constructed, erected and placed in position to the satisfaction and with the approval of the Fire Marshal.

Provided, however, that the Fire Marshal of the City and County of San Francisco may, when granting a permit to store and use crude petroleum for fuel, in any part of said City and County, grant with said permit an additional permit to keep on hand for use only enough crude petroleum as said Fire Marshal may determine necessary. Said crude petroleum shall be stored in such a place and manner as said Fire Marshal shall deem safe to life and property.

Provided, further, however, that this section shall not apply to gas companies in the storage or use of crude petroleum in the manufacture of illuminating gas for public use. (As amended by Ord. 5991. App. Sept. 4, 1923.)

Section 1-B. The following described area is hereby excluded from the above described district in which it shall be unlawful to store crude petroleum:

Commencing at the point of intersection of the cen-

ter line of Mason Street with the center line of Beach Street; running thence southerly along the center line of Mason Street to its intersection with the center line of North Point Street; thence easterly along the center line of North Point Street to its intersection with the center line of Powell Street; thence northerly along the center line of Powell Street to its intersection with the center line of Beach Street; thence westerly along the center line of Beach Street to its intersection with the center line of Mason Street and the point of commencement. Section 1B added by Ord. 8850 (N. S.), app. September 22, 1930.

### USE OF CRUDE PETROLEUM

Section 2. No person or persons, firm, company or corporation shall, within the limits of the City and County of San Francisco, construct, erect or maintain any plant, or use any device or apparatus for burning crude petroleum or any of its products for fuel purposes, or use any device or apparatus whereby gas is generated from crude petroleum or any of its products for fuel purposes, without permission of the Board of Supervisors of the City and County of San Francisco; said plant, device or apparatus shall be constructed, erected and placed in position to the satisfaction and with the approval of the Fire Marshal of the City and County of San Francisco and in such manner as said Fire Marshal shall deem safe to life and property.

No permit shall be granted to construct, erect or maintain any such plant, device or apparatus using a pressure, syphon or gravity system, and no such plant, device or apparatus using a pressure, syphon or gravity system shall be constructed, erected or maintained within the limits of the City and County of San Francisco.

The Fire Marshal is hereby authorized, empowered and directed to prescribe the necessary conditions which shall govern the exercise of special privileges granted by the Board of Supervisors for the storage of crude petroleum as a fuel.

Provided, however, that this section shall not apply to ordinary kerosene or coal oil lamps or properly

constructed kerosene or coal oil stoves using oil which will stand a fire test of 110 degrees Fahrenheit or better, before it will flash or emit an inflammable vapor.

No crude petroleum or any of its products, or any oils or fluids, shall be used for fuel, cooking, heating or illuminating purposes within the City and County of San Francisco, unless the same will stand a fire test of 110 degrees Fahrenheit or better, before it will flash or emit an inflammable vapor. (As amended by Ord. 5991. App. Sept. 4, 1923.)

### **Storage of Any of the Products of Petroleum.**

Section 3. No person or persons, firm, company or corporation shall keep, store or permit the keeping of, or storage of, within the limits of the City and County of San Francisco, in larger quantities than fifty (50) gallons, to be always kept in metal cans or iron tanks, in any one building or upon any premises, place or street, any of the products of petroleum, including gasoline, benzine, naptha, or any hydrocarbon liquid, which will flash or emit an inflammable vapor at a temperature of below 110 degrees Fahrenheit, except within those portions of the City and County of San Francisco which are particularly bounded and described in Section 1 of this Ordinance, for the storage of crude petroleum.

All products of petroleum, including gasoline, benzine, naptha or any hydrocarbon liquid, which will flash or emit an inflammable vapor at a temperature below 110 degrees Fahrenheit, which are kept or stored within those portions of the City and County of San Francisco, and which are particularly bounded and described in Section 1 of this Ordinance, for the storage of crude petroleum, shall be kept or stored in steel tanks. The thickness of the plates used in the construction of said storage tanks shall be in accordance with the requirements of the Fire Marshall of said City and County.

Said storage tanks shall in all cases be inclosed and entirely surrounded by a solid brick or reinforced concrete wall, capable of retaining and holding the

contents of each storage tank; there shall be no opening of any kind in said walls; said walls shall be of such construction, height and thickness as the Fire Marshall of the City and County may prescribe.

All storage tanks shall be constructed, erected and placed in position to the satisfaction and with the approval and under the direction of the Fire Marshall of the City and County.

In lieu of storing of any of the articles herein mentioned in steel tanks inclosed in brick or reinforced concrete walls, the said articles may be stored in a building or warehouse.

All buildings or warehouses used for the keeping or storing of any of the products of petroleum, including gasoline, benzine, naptha or any hydrocarbon liquid, and within those portions of the City and County of San Francisco which are particularly bounded and described in Section 1 of this Ordinance, for the storage of crude petroleum, shall be constructed of brick, stone or reinforced concrete, not to exceed one story in height, and the walls of all said buildings or warehouses shall not be less than seventeen (17) inches in thickness if of brick or stone, and if of reinforced concrete, as per Part VIII of the Building Laws of the City and County of San Francisco; the sills of all such buildings or warehouses shall be raised at least two feet high, so as to prevent the overflow of such substances beyond the building or warehouse where any of the said articles may be kept or stored.

All said buildings or warehouses must in all respects be fireproof and devoted exclusively to the storage of said articles. (See Section 5 of Ordinance 745, as Amended by Ordinance 8536, Passed Sept. 23, 1929.)

#### Use of Gasoline.

Section 4. No person or persons, firm, company or corporation shall use for heating, burning, illuminating purposes or for generating gas, any gasoline, benzine or naptha within the limits of the City and County of San Francisco, without a printed permit, issued and



signed by the Fire Marshal of the City and County of San Francisco.

Application for permit must be made to the above named officer and must give the name of the applicant, the location of the premises where it is proposed to use the above named liquid and the manner in which it is proposed to use it.

Said permit will be granted by said Fire Marshal, except where, in the judgment of the Fire Marshal, the use by the applicant in the manner proposed by him would endanger the safety of life and property.

### **Storage of Kerosene or Coal Oil in Certain Limits.**

Section 5. No person or persons, firm, company or corporation shall keep, store, or permit the storage of, within the limits of the City and County of San Francisco, any kerosene or coal oil, in any one building or upon any premises or street, in larger quantities than five hundred (500) gallons, to be always kept in metal cans or iron tanks, except within that portion of the City and County of San Francisco, which is particularly bounded and described in Section 1 of this Ordinance for the storage of crude petroleum; and all buildings to be used for the storage of kerosene or coal oil and within that portion of the City and County of San Francisco, which is particularly bounded and described in Section 1 of this Ordinance for the storage of crude petroleum, shall be constructed as provided in Section 3 of this Ordinance for the storage of any of the products of petroleum.

### **Adulteration of Oils Prohibited.**

Section 6. No person or persons, firm, company or corporation shall mix, adulterate or offer for sale any oils used for heating or illuminating purposes, with benzine, naphtha, gasoline or any other substance; and all oils or fluids manufactured from petroleum or any of its products to be used for heating or illuminating purposes, shall be required to stand a fire test of 110 degrees Fahrenheit, or better, before it shall flash or emit an inflammable vapor.



### **Cases and Packages of Heating or Illuminating Oils to Be Stamped.**

Section 7. Any person or persons, firm, company or corporation, manufacturing or selling heating or illuminating oils or fluids made from petroleum or any of its products, shall be required to have stamped upon the case, package or can where easily seen, and in plain letters at least one-half inch in length, the name of the oil or fluid which the case, package or can contains; the name of the seller thereof and his place of business, and, if the case, package or can contains kerosene or coal oil to be used for heating or illuminating purposes, the words "Warranted to stand a fire test of 110 degrees Fahrenheit, or better, before it will flash or emit an inflammable vapor," shall also be stamped on each case, package or can; and any seller disposing of five gallons, more or less, in metal cans or otherwise, shall furnish a sample of the oil, whenever requested to do so by the Fire Marshal for the purpose of testing.

### **Test of Oils, Instruments to Be Used.**

Section 8. Any question arising under the provisions of this Ordinance as to the character of the oils mentioned in this Ordinance, the same shall be tested by the Fire Marshal of the City and County of San Francisco, and he shall decide the test of such oils, and the decision of the Fire Marshall shall be final.

The said oils shall be tested and their quality determined by the Fire Marshal, using an electric spark open tester; and it shall be the duty of the Fire Marshal to carry out the provisions of this Ordinance in regard to all products of petroleum, and said Fire Marshal may enter on any premises, place or store where such oils are manufactured, stored, kept or sold, for the purpose of examining such oils, and no person shall hinder or obstruct such officer in carrying out the foregoing provisions of this section.

### **Refining Oils Within Certain Limits.**

Section 9. No person or persons, firm, company or corporation, shall boil or refine any crude petroleum or any of its products, or boil or refine any oils, or maintain or erect or cause to be erected any works for boil-

ing or refining oils, within the City and County of San Francisco, except within that portion of the City and County of San Francisco bounded on the westerly side by Third Street and San Bruno Avenue; on the south by the county line; on the east by the water front of said City and County, and on the north by Islais Creek.

### Storage of Explosives Within Certain Limits.

Section 10. No person or persons, firm, company or corporation shall manufacture or cause to be manufactured, or bring or cause to be brought into, or receive or keep or store, or suffer to remain within the limits of the City and County of San Francisco, any blasting powder, hercules or giant powder, nitroglycerine, daulin, dynamite or other explosive, liquid or material, or compound having an explosive power greater than that of ordinary gunpowder, except within that portion of the City and County of San Francisco bounded on the westerly side by Third Street and San Bruno Avenue; on the south by the county line; on the east by the water front of said City and County, and on the north by Islais Creek.

No blasting powder, hercules or giant powder, nitroglycerine, daulin, dynamite, or any other explosive liquid or material, or compound, having an explosive power greater than that of ordinary gunpowder, kept or stored within the limits of the City and County of San Francisco, which is bounded and described in this section, shall be within five hundred feet of any dwelling house or place of business.

Provided, that this section shall not apply to the freight terminals and yards in said City and County of steam railroad corporations subject to the jurisdiction of the Railroad Commission of the State of California, who receive or deliver freight within such terminals or yards, when the explosives received for shipment or held for delivery in such terminals or yards are in less than carload lots.

Provided, further, that this section shall not apply to the United States Government Reservation at the Presidio and Fort Mason (Black Point), or to any shipments

of explosives to be used for the purpose of the United States Government.—As amended by Ordinance No. 1945 (N. S.)

### **Prohibiting the Transportation of Nitroglycerine.**

Section 11. No person shall convey or cause to be conveyed from one place to another in the City and County of San Francisco, any liquid nitro-glycerine; and no person or persons, firm, company or corporation, shall manufacture or cause to be manufactured any liquid nitro-glycerine within the limits of the City and County of San Francisco, and no liquid nitro-glycerine shall be kept or stored, in or about or on any premises or street, within the limits of the City and County of San Francisco.

### **Storage of Gunpowder.**

Section 12. No person or persons, firm, company or corporation, shall receive, keep or store, or cause to be received, kept or stored, or aid or assist any person in receiving, keeping or storing gunpowder in a larger quantity than ten pounds, into or in any building or upon any premises, within the City and County of San Francisco, except while within the custody of a steam railroad carrier subject to the jurisdiction of the Railroad Commission of the State of California, and in its freight terminals or yards, awaiting shipment by it, or pending delivery to a consignee, and except as hereinafter provided.

Any person or persons, firm, company or corporation, keeping or storing more than ten pounds of gunpowder, shall keep the same in an air-tight metallic vessel; said vessel shall be marked with the words "Gunpowder—Dangerous" in plain letters, painted in white on a dark ground, not less than three inches in height; said vessel shall be kept at all times in view near the entrance of the premises where kept, so as to be easily removed; said vessel shall contain not more than fifty pounds of gunpowder.

No person or persons, firm, company or corporation shall keep or store, or cause to be kept or stored, or aid or assist any person in receiving, keeping or storing more than fifty pounds of gunpowder in the City and

County of San Francisco, except within the freight terminals and yards in said City and County of steam railroad corporations subject to the jurisdiction of the Railroad Commission of the State of California, and receiving or delivering freight within such terminals or yards, when the explosives received for shipments or held for delivery in such terminals or yards are in less than car-load lots, and except within those portions of said City and County, which are particularly designated and described in Section 10 of this Ordinance, or under the conditions named therein.—As amended by Ordinance No. 1945 (N. S.)

### **Conveyance of Gunpowder**

Section 13. No person or persons, firm, company or corporation, shall convey or cause to be conveyed or assist in conveying, in any vehicle or otherwise any gunpowder, unless the same shall be securely packed in air-tight metallic packages; said packages shall be securely covered while in the vehicle.

### **Gunpowder—Shipping, Discharging and Having It On Board.**

Section 14. No person or persons, firm, company or corporation shall discharge gunpowder from any vessel, except from the vessel's side and before the said vessel shall have been hauled up to the wharf.

No vessel shall be permitted to remain at any wharf within the limits of the City and County of San Francisco more than twenty-four (24) hours after receiving gunpowder on board; and if the vessel shall lie at the wharf over night, a watchman shall be kept on duty on board said vessel all night.

### **Gunpowder When Loaded to Be Immediately Forwarded.**

Section 15. All gunpowder deposited on the wharf for shipment shall be immediately passed on board the vessel which is to receive the same.

All gunpowder landed or placed on any sidewalk, street or public way for forwarding or shipment shall be forwarded or shipped immediately after it shall have been so landed or placed.

### **Vessels Having Gunpowder on Board to Be Afloat at Low Tide.**

Section 16. It shall be unlawful for any vessel to lie at any wharf, pier or bulkhead, with gunpowder on board, unless such vessel will be afloat at low tide.

### **Gunpowder, Manufacture and Storage of Fireworks.**

Section 17. No person or persons, firm, company, corporation or association shall receive, keep or store, or have in any one place, more than fifty (50) pounds of gunpowder, or shall erect or maintain any building for the storage or keeping of gunpowder, or for the manufacture of or storage of fireworks, within the limits of the City and County of San Francisco, except within that portion of the City and County of San Francisco bounded and described as follows:

Commencing at the intersection of the shore line of the Bay of San Francisco with the easterly end of Islais Creek, thence westerly along the center line of Islais Creek to Third street; thence southerly along the center line of Third street to its intersection with the center line of San Bruno avenue; thence in a southerly direction following the center line of San Bruno avenue to the county line of San Francisco; thence following the county line of San Francisco in an easterly direction to the shore line of the Bay of San Francisco; thence along the shore line of the Bay of San Francisco in a northerly and northwesterly direction to the point of commencement.—As amended by Ordinance No. 271 (N. S.)

### **Duty of the Police.**

Section 18. It shall be the duty of all police officers to at once notify the Fire Marshal upon their becoming cognizant of the violation of any of the provisions of this Ordinance.

### **Transportation of Calcium Carbide.**

Section 19. All calcium carbide in transit through the City and County of San Francisco must be inclosed in hermetically sealed metal receptacles and plainly



marked "Calcium Carbide—Dangerous If Not Kept Dry," and no such receptacle shall contain more than one hundred and twenty (120) pounds of said carbide.—As amended by Ordinance No. 494 (N. S.)

### Storage of Calcium Carbide.

Section 20. All calcium carbide shall be kept in hermetically sealed metal receptacles.

And it shall be unlawful for any person or persons, firm, company, association or corporation to keep, store or permit the keeping or storage of, within the limits of the City and County of San Francisco, any calcium carbide in greater quantities than one hundred and twenty (120) pounds in the aggregate, except in that portion of said City and County bounded on the westerly side by Third street and San Bruno avenue, on the south by the county line, on the east by the water front of said City and County, and on the north by Islais Creek.

Provided, however, that the Fire Marshal of the City and County of San Francisco may, when granting a permit to erect any gas machine in any part of said City and County, grant with said permit an additional permit to keep on hand for use only enough calcium carbide not to exceed 100 pounds in the aggregate, to supply said gas machine. Said calcium carbide to be stored in such a place and manner as said Fire Marshal shall deem safe to life and property.

All buildings to be used for the storage of calcium carbide within that portion of the City and County of San Francisco hereinabove specified and described shall be constructed of corrugated iron, brick or stone, not to exceed one story in height, and the walls of said brick or stone building shall not be less than sixteen (16) inches in thickness, and must in all respects be fire and waterproof, and devoted exclusively to the storage of calcium carbide, and in all such buildings no artificial light or heat shall be permitted.—As amended by Ordinance No. 494 (N. S.)

Section 20-a. (Use of Acetylene for Welding and Cutting and the Storage of Calcium Carbide for Weld-



ing Generators):—Generators shall be located at a place designated by the Fire Marshall.

Generator houses shall be constructed of noncombustible material and shall be well ventilated to the outer air in a manner to be approved by the Board of Public Works.

No materials of any kind shall be stored in a generator house.

All calcium carbide shall be stored in a waterproof metal receptacle on wheels, marked "Calcium Carbide, Dangerous if Not Kept Dry." Said receptacle shall be placed near the front entrance to the building, so that it can be easily removed in case of fire.

A sign with letters at least three inches high, marked "Calcium Carbide," shall be placed on front of the building at the entrance.

Calcium carbide in quantities not to exceed four hundred (400) pounds may be stored, when contained in approved metal packages not to exceed one hundred (100) pounds each, provided that all but one of the packages of each size of carbide shall be sealed and the seals shall not be broken so long as there is carbide in excess of one (1) pound in any other unsealed package in the building.

Generators shall be of approved construction and shall be plainly marked with the maximum rate in cubic feet of acetylene per hour for which they are designated, the amount of carbide for a single charge, the manufacturer's name and address, and the name or number of the type of machine.

(a) Under no conditions must acetylene be subjected to more than 15 pounds pressure per square inch unless it is dissolved in acetone or other approved solvent and contained in a cylinder. Self-compression generators which develop pressure above 15 pounds to the square inch are absolutely prohibited.

(b) The use of liquid acetylene or gas generated therefrom is absolutely prohibited.

(c) Tests of generators or piping for leaks must not be made with a flame and a flame must never be

applied to an outlet from which the burner has been removed. Tests for leaks should be made with soapy water.

(d) Soldering irons shall not be used on acetylene generators until it is certain that all gas has been removed. Soldering irons shall not be used on acetylene cylinders under any conditions.

(e) The charging of the generator and the handling of the calcium carbide shall be by daylight only and no fire or artificial light, other than incandescent electric vapor-proof lights, shall be permitted within 10 feet of the generator unless separated therefrom by a brick or other non-combustible wall having no opening within 10 feet of said generator.

(f) Electrical apparatus, such as switches, telephones and other apparatus which may cause a spark, must not be located in any generating or gas storage room. All electrical installation shall be in accordance with the National Electrical Code.

(g) Under no circumstances shall the solid residuum or exhausted material be allowed to go into any sewer pipes or drains.

The Fire Marshall shall have power to revoke or suspend any permit granted under the terms of this Ordinance for violation of any of its provisions.—(As amended by Ordinance No. 6289.)

### **Sale of Calcium Carbide.**

Section 21. No calcium carbide shall be kept or stored in any building used for dwelling purposes, and not more than one hundred and twenty (120) pounds of calcium carbide, either in cans, cartridges or otherwise, shall be stored in any building used as a garage, or for mercantile or manufacturing purposes, and this amount shall be kept only on a written or printed permit obtained from the Fire Marshal of the City and County of San Francisco, which permit shall provide that all packages of calcium carbide (not to exceed one hundred and twenty (120) pounds in the aggregate) shall be kept in water-tight packages, no one package

to contain more than ten (10) pounds of calcium carbide, and further provided that all packages of calcium carbide shall be kept at all times in an iron watertight receptacle. Said receptacle shall be placed near the front entrance of the premises, so as to be easily removed in case of fire, and shall be plainly marked with letters of not less than three (3) inches, "Calcium Carbide—Dangerous If Not Kept Dry."—As amended by Ordinance No. 494 (New Series), approved July 6, by Ordinance No. 494 (N .S.)

Section 22. The manufacture, transportation, storage, sale or use of liquefied acetylene is absolutely prohibited within the limits of the City and County of San Francisco.

### **Duty of the Fire Marshal.**

Section 23. It shall be the duty of the Fire Marshal to carry out the provisions of this Ordinance, and the Fire Marshal shall have access to any and all buildings during the day time where calcium carbide is stored or kept, to see that all provisions of this Ordinance are strictly complied with.

### **Erection of Gas Works or Gas Machines for the Manufacture of Illuminating Gas.**

Section 24. No person or persons, firm, company or corporation, shall erect any works, apparatus, gas machine or machinery of any kind for the manufacture of illuminating gas within the City and County of San Francisco without first obtaining a permit from the Fire Marshal of the City and County of San Francisco.

### **Gas Engines.**

Section 25. No person or persons, firm, company or corporation, shall erect or maintain, or cause to be erected or maintained, any gas engine above the first floor of any building within the City and County of San Francisco, without a permit from the Fire Marshal of the City and County of San Francisco.

### **Gasoline, Distillate or Vapor Engines.**

Section 26. No person or persons, firm, company or corporation, shall erect, maintain or use, or cause to

be erected, maintained or used, within the limits of the City and County of San Francisco, any gasoline, distillate or vapor engine of any kind, whereby a gas is generated from crude petroleum or any of its products, for the motive power of said gasoline, distillate or vapor engine of any kind without a permit from the Fire Marshal of the City and County of San Francisco.

Said permit shall be granted by said officer, except where, in the judgment of the Fire Marshal, the use of the gas engine by the applicant in the manner proposed by him would endanger the safety of life and property.

### **Arson—Reward for Arrest and Conviction of the Offenders.**

Section 27. Whenever a fire shall appear to have been caused by incendiarism, or when any bonfire shall have been kindled or fire shall have been set to a building or structure in violation of the provisions of this Ordinance, the Mayor may, upon application of the Fire Marshal or at his discretion, offer a reward of not more than \$250 for the arrest and conviction of the offender, and the Mayor may at any time, when in his opinion it appears expedient, offer a standing reward not to exceed \$250 for the arrest and conviction of any person guilty of arson, or of any attempt at arson, and any reward which may become payable under the order of the Mayor, shall be paid out of the Treasury of the City and County.

### **Rubbish, Shavings, Hay, Straw or Litter**

Section 28. Each person in the City and County of San Francisco, making, using or having the charge or control of shavings, hay, straw, sacks, bags, litter or any other combustible waste or fragments, shall, at the close of each day, cause the same to be securely stored or disposed of, so as to be safe from fire.

All receptacles for waste, rags, paper or other substance liable by spontaneous combustion or otherwise to cause fire must be made of incombustible material.

And all such receptacles shall be kept in such a place that were the contents of said receptacles to ignite, the same may be easily seen and removed.

No explosive or inflammable compound or combustible material of any kind shall be kept, stored or placed under any stairway of any building, or used in such place or manner as to obstruct or render egress hazardous in case of fire.

### **Gas Lights and Electric Lights in Show Windows**

Section 29. All gas lights, gas burners, arc lights or incandescent lights in show windows, shall be covered with wire netting or globes; but this shall not apply to stationary gas reflectors in the upper portion of such show windows.

No goods of any kind or description shall be displayed, placed, hung or suspended within six inches of any such wire netting or globe, used as a covering for any gas light, gas burner, arc light or incandescent light, in show windows. Also see Ord. 11.83, app. June 13, 1932.

### **Ashes**

Section 30. It shall be unlawful for any person or persons to deposit any ashes, cause the same to be deposited, or placed, or to permit or suffer the same to be or remain in any wooden vessel or receptacle, or any vessel or receptacle composed or made of combustible material, but said ashes shall be placed and kept in some safe depository or receptacle of galvanized iron or other incombustible material, and not less than two inches from any woodwork or structure.

### **Fires in Open Tins, Cans, Etc.**

Section 31. No person shall kindle or maintain any fire of charcoal, coal, wood or other combustible material in or upon any open tin, metal can or any earthen vessel or vessels whatsoever, in or upon any building or premises in this City and County, or in any furnace, range or stove of any kind, unless the same be connected by means of a good sheet-iron flue or pipe with a brick or patent chimney to conduct the smoke and fire into said brick or patent chimney.

Provided, however, that the foregoing provisions of this Ordinance shall not be deemed to apply to portable



furnaces used by artisans in the prosecution of their regular and lawful business, or to properly constructed and authorized kerosene or gas stoves used for cooking purposes or for the heating of chambers.

### **Manufacture of Matches.**

Section 32. No person or persons, firm, company or corporation shall manufacture matches, erect or cause to be erected, any works, apparatus, machinery or building for the manufacture of matches within the City and County of San Francisco, except within that portion of the City and County of San Francisco bounded on the westerly side by Third street and San Bruno avenue; on the south by the county line; on the east by the water front of said City and County, and on the north by Islais Creek.

### **Portable Lights; Protection Combustible Materials.**

Section 33. No person shall use any portable light in any building or place where combustible materials are kept unless such light be securely enclosed in a lantern; and no person shall use a light in any place where combustible materials shall be suspended above it, without so protecting it as to prevent such materials from falling upon or coming in contact with it.

### **Enforcement of the Provisions of This Ordinance.**

Section 34. The Fire Marshal of the City and County of San Francisco is hereby directed to see that the provisions of this Ordinance are enforced, and to that end the said Fire Marshal is hereby authorized and empowered, whenever any complaint shall be made to him of the violation of any of the provisions of this Ordinance, and he has reasonable grounds to believe that any of the provisions of this Ordinance have been or are being violated by any person or persons, firm, company or corporation, to enter any premises, place or building about which complaint is made, or upon or in which he has reasonable grounds to believe that any of the provisions of this Ordinance have been or are being violated.

And the said Fire Marshal is hereby directed to make complaints in the Police Courts against any person or

persons, firm, company or corporation violating any of the provisions of this Ordinance.

### **Penalty.**

Section 35. Any person or persons, firm, company or corporation that violates, disobeys or refuses to comply with any of the provisions of this Ordinance shall be deemed guilty of a misdemeanor, and, upon conviction, shall be punished by a fine not exceeding five hundred dollars or by imprisonment in the County Jail for not more than six months, or by both such fine and imprisonment; and each such person or persons, firm, company or corporation shall be deemed guilty of a separate offense for every day such violation, disobedience or refusal shall continue, and shall be subject to the penalty imposed by this Ordinance for each and every such separate offense.

### **Repealing All Conflicting Orders or Ordinances.**

Section 36. All orders or parts of orders, and all Ordinances or parts of Ordinances in so far as they conflict with any of the provisions of this Ordinance are hereby repealed.

Section 37. This Ordinance shall take effect and be in force from and after its passage.

### **Ordinance No. 4395 (N. S.) Regulating the Storage of Gasoline or Any Product of Petroleum Flashing Below 110 Degrees Fahrenheit.**

Section 1. It shall be unlawful for any person or persons, firm, company, or corporation to have in, upon or about their premises more than a total amount of fifty (50) gallons in the aggregate of benzine, gasoline or any product of petroleum that will flash or emit an inflammable vapor below a temperature of one hundred and ten (110) degrees Fahrenheit, except as provided for in Section 3 of Ordinance No. 302, approved May 24, 1901.

Section 2. No benzine, gasoline or any product of petroleum that will flash or emit an inflammable vapor below a temperature of one hundred and ten (110) degrees Fahrenheit, shall be kept or stored in glass

bottles, or in any other fragile container. Five (5) gallons may be kept and stored in an approved can or cans, not to exceed five (5) gallons in the aggregate. All over five (5) gallons shall be kept and stored in an approved portable filling tank, commonly called a gasoline buggy.

Said approved portable filling tank or buggy shall not have a greater capacity than fifty (50) gallons and shall be constructed of not less than No. 12 U. S. Standard gauge, galvanized steel, or of iron not less than three-sixteenths (3-16) of an inch in thickness, oxy-acetylene welded, or riveted, with rivets not more than one (1) inch apart from centers; mounted on all metal wheels with rubber tires, soldered and painted on the outside.

The contents of said approved portable filling tank or buggy must be removed by using a pump. No gravity, syphon or pressure system shall be used in removing the contents from the approved portable filling tank or buggy.

Said approved portable filling tank or buggy must always be filled at the curb line of the sidewalk.

All portable filling tanks or buggies, or metal cans, must be approved by the Fire Marshal.

Section 3-A. Before any benzine, gasoline or any product of petroleum or any hydrocarbon fluid that will flash or emit an inflammable vapor below a temperature of one hundred and ten (110) degrees Fahrenheit shall be stored in, upon or about any premises in excess of five gallons, application for permit must be made to the Fire Marshal. Said permit will be granted by said Fire Marshal, except where in the judgment of said officer the use by the applicant in the manner proposed by him would endanger the safety of life and property (as added by ordinance 7542.)

Section 3. Not more than a total amount of five (5) gallons of benzine, gasoline or any product of petroleum that will flash or emit an inflammable vapor below a temperature of one hundred and ten (110) degrees Fahrenheit, shall be kept or stored in any building for any purpose whatever, wherein a human

being sleeps in the night time. Night time shall mean between the hours of sunset and sunrise.

**Section 4. "Safety Regulations."** No benzine, gasoline or any product of petroleum that will flash or emit an inflammable vapor below a temperature of one hundred and ten (110) degrees Fahrenheit shall be kept or allowed to remain in an open receptacle in any building within the City and County of San Francisco.

A. One three (3) gallon chemical fire extinguisher, which shall be approved by the Fire Marshal, shall be kept where easy of access at all times, where benzine, gasoline or any product of petroleum that will flash or emit vapor below a temperature of one hundred and ten (110) degrees Fahrenheit, is kept or stored for sale, in a greater quantity than five (5) gallons, so as to be used in case of fire.

B. The approved portable filling tank or buggy shall be kept at all times near the door leading into the street, so that it may be readily removed from the premises in case of fire.

**Section 5.** It shall be the duty of any and all members of the Board of Fire Wardens to see that all of these provisions and regulations are complied with, and for that purpose they shall have access at all times to any and all parts of the premises where benzine, gasoline or any products of petroleum that will flash or emit an inflammable vapor below a temperature of one hundred and ten (110) degrees Fahrenheit is kept or sold at retail.

**Section 6.** Any person who shall violate any of the provisions of this Ordinance shall be guilty of a misdemeanor and, upon conviction thereof, shall be punished by a fine not to exceed five hundred (500) dollars or by imprisonment in the County Jail for not more than six (6) months, or by both such fine and imprisonment.

**Section 7.** This Ordinance shall take effect and be in force immediately.

**Ordinance No. 223.** Providing for the Construction and Control of Automatic Sprinkler Equipments for Buildings and Manufacturing Plants and the Connection of

**the Same with the Pipes and Mains of Persons, Companies or Corporations Furnishing Water to the Inhabitants of the City and County of San Francisco.**

Section 1. Every building and manufacturing plant which by specific permit of the Fire Department may hereafter be equipped with automatic fire extinguishers must be so equipped in accordance with the requirements of this section. The owner or his agent or agents must have plans and specifications of such automatic sprinkler system prepared, which shall be submitted for approval to the Fire Department of the City and County of San Francisco, and when approved by it the apparatus must be constructed in accordance therewith and under the supervision of the Fire Department.

Section 2. There shall be no less than two sources of water supply for each system of automatic fire extinguishers which shall hereafter be constructed in and upon any one building or any one manufacturing plant consisting of more than one building. Said two sources of water supply shall be in accordance with the "Sprinkler Rules" of the Board of Fire Underwriters of the Pacific, but in no case shall any connection exceed one-half of the diameter of the main, nor exceed four inches as a maximum, except that in such cases where the above referred to "Sprinkler Rules" of the Board of Underwriters require a diameter of more than four inches, then it shall be optional with the person, company or corporation to either put in such sized connection or make up the required capacity by two pipes.

Section 3. Where one or both of the sources of water supply to any system of automatic fire extinguishers shall be from the pipes or mains belonging to any person, company or corporation supplying water to the inhabitants of the City and County of San Francisco, the connection with such pipes or mains belonging to said person, company or corporation shall be in accordance with the "Sprinkler Rules" of the Board of Underwriters of the Pacific, except as provided for in section 2, and such connection or connections shall be made by such person, company or corporation within thirty days after presentation of a specific permit of the Fire Department of the City and County of San Francisco.



All costs and expenses of such connections and material for same, including a meter, shall be paid by the owner or owners of the property so equipped. A good and sufficient bond in the sum of one thousand (\$1,000.00) dollars may be required by said person, company or corporation furnishing water for said equipment as a guarantee that the water supplied through such sprinkler equipment, or any part thereof, shall be used only for purposes connected with such sprinkler equipment.

Section 4. Any connection of any such automatic fire extinguisher system made with the mains of such person, company or corporation shall be by means of pipes, upon which shall be placed between the said automatic fire extinguisher system and the pipes or mains of such person, company or corporation, an indicator gate valve approved by the Fire Department, which shall be located at a point to be selected by the Fire Department not more than one hundred feet from the building or plant equipped with such automatic fire extinguisher system. Said pipes connecting such automatic fire extinguisher system with said meter and said indicator gate valve and such area walls as the Fire Department may require shall be constructed under the direction and supervision of the Fire Department, and said indicator gate valve shall be and remain in charge of and under the control of the Fire Department of the City and County of San Francisco.

Section 5. Any person who shall tap the pipes of any automatic sprinkler system for the purpose of using the water flowing therein for any other purpose than for use in such sprinkler system, or shall use the waters conducted through such system for any other purpose than for use in such sprinkler system, or shall maliciously interfere with said pipes or appliances, shall be deemed guilty of a misdemeanor, and, on conviction, shall for each offense be subject to a fine of not less than twenty-five dollars nor more than three hundred dollars; but should such water be used for any other purpose than for the purposes of the said automatic sprinkler, then the person, company or corporation with whose mains said apparatus has been connected shall have the right to disconnect said auto-

matic sprinkler system from its mains (without any liability or claim of damage), and action may be had and taken under the terms of said bond.

Section 6. The Fire Department of the City and County of San Francisco is hereby authorized and directed to carry out the provisions of this Ordinance.

Section 7. This Ordinance shall take effect immediately.

**Ordinance No. 1144. Regulating the Use of Aisles and Passageways and Stairways in Theatres and Public Halls.**

Section 1. It shall be unlawful for the owner, lessee, manager or other person, firm or corporation having charge of any theatre or public hall to permit any person during a performance, exhibition, lecture, entertainment or public assemblage therein to sit or remain standing in any aisle, passageway or stairway in such theatre or public hall.

Section 2. All Ordinances and parts of Ordinances in so far as they conflict with this Ordinance, are hereby repealed.

Section 3. A violation of any of the provisions of this Ordinance shall be a misdemeanor, and shall be punishable by a fine not exceeding one hundred (100) dollars, or by imprisonment in the County Jail not exceeding one hundred (100) days, or by both such fine and imprisonment.

Section 4. This Ordinance shall go into effect from and after its passage.

**Ordinance No. 862. Prohibiting the Obstruction of Passageways of Theatres and Places of Public Assemblage.**

Section 1. It shall be unlawful for any person, firm or corporation having control or management of any theatre, hall, concert hall or other place of public assembly to obstruct, or cause or permit the obstruction, of any entrance, exit, aisle, stairway, lobby or passageway thereof, during any performance, exhibition, lecture, concert or any public assemblage therein.

Section 2. The owner, manager or person having control or management of any theatre, hall, concert

hall or other place of public assemblage, must notify the Chief of Police at least six hours before the same shall be opened for the purpose of public assemblage therein.

Section 3. Any person, firm or corporation who shall violate any of the provisions of this Ordinance shall be guilty of a misdemeanor, and, upon conviction thereof, shall be punished by a fine not to exceed five hundred (500) dollars, or by imprisonment in the County Jail for not more than six (6) months or by both such fine and imprisonment.

Section 4. Order No 3071 of the General Orders of the Board of Supervisors, entitled "Prohibiting the Obstructing of Entrances, Exits, Aisles, Stairways, Lobbies or Passageways of Theatres or places of Public Assemblages—Chief of Police to Enforce, Etc.," is hereby repealed.

Section 5. This Ordinance shall take effect and be in force immediately.

**Ordinance No. 952 (N. S.) Requiring the Placing of Signs and Red Lights to Show the Location of Fire Escapes and Requiring Lights in the Hallways and Passageways of Hotels, Public Lodging Houses and Public Rooming Houses and Apartment Houses, for Public Safety, and Repealing Ordinance No. 913, Approved June 26, 1903.**

Section 1. Every person, firm or corporation, owner, proprietor, manager, superintendent, lessee or agent of any building used as a hotel, public lodging house, public rooming house or apartment house within the City and County of San Francisco, shall place or cause to be placed in a conspicuous position in every hallway thereof, signs which shall indicate by letters, not less than three inches in height, the location of every fire escape; and near every such sign there shall be placed a red light, which must be kept burning from sunset to sunrise.

Section 2. Every person, firm or corporation, owner proprietor, manager, superintendent, lessee or agent of any building used as a hotel, public lodging house, public rooming house or apartment house, within the City

and County of San Francisco, shall place or cause to be placed in every hallway and passageway a bright white light, capable of furnishing light enough to enable any person to see the stairway and exit from said hallway and passageway, to guide them in case of fire or panic to safety. Said white light shall burn from sunset to sunrise.

Section 3. It shall be the duty of the Chief of Police to instruct all police officers to inspect all hotels, public lodging houses, public rooming houses and apartment houses on their respective beats, at least once a month during the hours of sunset and sunrise, for the purpose of seeing that the provisions of this Ordinance are strictly complied with.

Section 4. Every person, firm or corporation, owner, proprietor, manager, superintendent, lessee or agent, who shall violate or refuse to comply with the provisions of this Ordinance, shall be guilty of a misdemeanor and upon conviction thereof shall be punished by a fine of not less than ten dollars nor more than one hundred dollars, or by imprisonment in the County Jail for not more than three months, or by both such fine and imprisonment; and each such person, firm or corporation, owner, proprietor, manager, superintendent, lessee or agent shall be deemed guilty of a separate offense for every day such violation, or refusal, shall continue, and shall be subject to the penalty imposed by this Ordinance for each and every separate offense.

Section 5. Ordinance No. 913, approved June 26, 1903, is hereby repealed.

Section 6. This Ordinance shall take effect immediately.

### **Ordinance No. 1021. Prohibiting the Obstruction of Hydrants on Public Streets.**

Section 1. It shall be unlawful for any person to obstruct any hydrant on any public street, or to place or deposit any lumber, rock, sand, or other substance within fifteen (15) feet of any hydrant on the roadway of any street.

Section 2. Any person who shall violate any of the provisions of this Ordinance shall be guilty of a mis-

misdemeanor and, upon conviction thereof, shall be punished by a fine not exceeding five hundred (500) dollars, or by imprisonment in the County Jail for not more than six (6) months, or by both such fine and imprisonment.

Section 3. This Ordinance shall take effect and be in force immediately.

**Ordinance No. 2027 (N. S.) Prohibiting the Unauthorized Use of or Interference With the Auxiliary High Pressure Water System.**

Section 1. It shall be unlawful for any person to use or interfere with any of the valves, gates, hydrants, or other parts of the Auxiliary High Pressure Water System, unless authorized so to do by the Department controlling the same.

Section 2. Any person violating the provisions of this Ordinance shall be deemed guilty of a misdemeanor, and upon conviction thereof be subject to a fine not to exceed five hundred dollars or by imprisonment in the County Jail for not more than thirty days, or by both such fine and imprisonment.

**Ordinance No. 974 (N. S.) Requiring Clear Passageways in Stables Where Horses Are Kept, So That Such Horses May Be Easily Removed in Case of Emergency.**

Section 1. In all stables where horses are kept and vehicles are stored, it shall be unlawful to obstruct the aisles or passageways with wagons, vehicles or otherwise, so as to prevent free access from the street to the stalls where the horses are kept, and a clear passageway shall be kept open at least eight feet wide from the main entrance to such stalls.

Section 2. Any person, firm or corporation violating any of the provisions of this Ordinance shall be deemed guilty of a misdemeanor and, upon conviction thereof, shall be liable to a fine of not more than five hundred dollars or by imprisonment in the County Jail for a period of not more than six months, or by both such fine and imprisonment.

Section 3. This Ordinance shall take effect immediately.



**Ordinance No. 174.** Providing for the Reference to the Chief Engineer of the Fire Department for the Purpose of Investigation and Report, of Application for Permits to Erect and Maintain (1) Cupola Furnaces or Other Appliances for Melting Iron or Any Other Metal; (2) to Erect and Maintain Any Steam Engine and Boiler or Steam Boiler; (3) to Erect and Maintain a Gas Engine on Any Story of a Building Other Than the First. Also Providing for a Reference to the Fire Marshall of Applications for Permits to Erect and Maintain Gasoline or Vapor Engines, or Any Engine or Boiler Using Crude Petroleum or Oil for Fuel, That Proper Conditions May Be Embodied in the Resolutions Granting Such Permits.

Section 1. All applications for the following permits, before final action is taken thereon by this Board, must be referred to the Chief Engineer of the Fire Department for investigation and report:

Applications for permission—

(1) To erect and maintain or use any cupola furnace, or other appliance for melting iron or any other metal.

(2) To erect and maintain any steam engine and boiler, or steam boiler.

(3) To erect and maintain a gas engine on any story of a building other than the first.

Section 2. All applications for permits to erect and maintain gasoline or vapor engines or any engine or boiler using crude petroleum or oil for fuel shall, before final action is taken thereon by this Board, be referred to the Fire Marshal for investigation, and to report the conditions necessary to be embodied in the resolutions granting such privileges to the petitioners.

Section 3. This Ordinance shall take effect and be in force from and after its passage.

Also see Boiler Ordinance 11.086.

**Ordinance No. 1023.** Regulating the Erection, Maintenance and Use of Steam Engines and Boilers and Steam Boilers.

Section 1. It shall be unlawful for any person, firm or corporation to erect, or cause to be erected, or to

maintain or use, any steam engine and boiler or steam boiler, without permission from the Board of Supervisors; and such permission shall not be granted unless the applicant thereof shall file, in the office of the Clerk of the Board of Supervisors, with his application, a certificate of the soundness of such steam engine and boiler or steam boiler, signed by the manufacturer thereof or by a competent engineer, who must also be a competent boiler inspector; provided, however, that the provisions of this Ordinance shall not apply to the temporary erection, maintenance or use of any steam engine and boiler or steam boiler for building or construction purposes.

Section 2. All steam engines and boilers and steam boilers must be constructed, erected and maintained to the satisfaction of the Board of Public Works.

Section 3. Permits for the erection, maintenance and use of steam engines and boilers and steam boilers are not transferable and may be revoked at the pleasure of the Board of Supervisors.

Section 4. Any person, firm or corporation who shall violate any of the provisions of this Ordinance shall be guilty of a misdemeanor and, upon conviction thereof, shall be punished by a fine not to exceed five hundred (500) dollars, or by imprisonment in the County Jail for not more than six (6) months, or by both such fine and imprisonment.

Section 5. This Ordinance shall take effect and be in force immediately.

Also see Boiler Ordinance 11.086.

## BOILER ORDINANCE

(Code No. 11.08)

Bill No. 258, Ordinance No. 11.086, as follows:

An ordinance regulating the installation and inspection of high-pressure steam boilers, low-pressure steam boilers, direct-fired hot-water heaters, indirect-heated hot-water tanks and pressure tanks, and for the issuance of the permits and certificates therefor, and establishing the fees to be charged for the inspection of said appliances.

Be it ordained by the People of the City and County of San Francisco as follows:

Section 1. (a) It shall be unlawful for any person, firm or corporation to proceed hereafter with the installation of any high-pressure steam boiler, low-pressure steam boiler, direct-fired hot-water heater, indirect-heated hot-water tank, or pressure tank in any fixed location in the City and County of San Francisco unless the permit so to do as herein provided shall have first been obtained from the Central Permit Bureau of the Department of Public Works of said City and County. Nothing herein contained shall be construed as evidence of proper performance or adequate capacity of any of the appliances herein mentioned.

Section 2. (a) Whenever used herein, the following terms shall have the following definitions:

(1) High-pressure steam boiler shall mean any metal vessel or container used for the generation of steam under pressure, exceeding 15 pounds per square inch gauge pressure.

(2) Low-pressure steam boiler shall mean any metal vessel or container having a heating surface of 3 square feet or more, used for the generation of steam under pressure, not exceeding 15 pounds per square inch gauge pressure.

(3) Direct-fired hot-water heater shall mean any metal vessel or container used for the purpose of heating water through the medium of heat directly applied to the shell and/or furnace walls and/or tubes, or of heat directly applied by electrically heated elements.

(4) Indirect-heated hot-water tank shall mean any closed metal vessel or container used for the purpose of storing hot water heated by any other method than the direct application of heat to the shell and/or furnace walls and/or tubes, or of heat produced by electrically heated elements.

5. Pressure tank shall mean such metal vessel or container used for the storage or accumulation of air or other substance under pressure as is covered by the safety orders of the Industrial Accident Commission of the State of California.

(6) Safety valve shall mean a safety valve conforming to the Code of the American Society of Mechanical

Engineers as adopted by the Industrial Accident Commission of the State of California and its safety orders.

(7) Relief valve shall mean a valve which conforms to the Code of the American Society of Mechanical Engineers as adopted by the Industrial Accident Commission of the State of California and its safety orders and which is used for the purpose of relieving excess pressure other than steam.

(b) All of the above defined articles are herein referred to as appliances, and the term appliance in this ordinance shall mean each and any of the above defined articles.

Section 3. (a) The term installation shall not be construed to mean restoration or replacement of previously installed appliances, when such restoration or replacement is made by persons, firms or corporations permanently employing boiler inspectors certified by the Industrial Accident Commission of the State of California; provided, however, that such restoration or replacement does not change the duty performed by the appliances affected.

(b) The term location shall mean premises used or buildings operated as one unit under one management.

Section 4. (a) Applications for the permits herein mentioned shall be filed in duplicate with the Central Permit Bureau of the Department of Public Works upon forms furnished by such Bureau, which forms shall set out information necessary to be given. If the Bureau so requires, plans and specifications in duplicate shall be filed with the application. If it is found that the proposed installation conforms to the requirements of this ordinance, then upon payment of fee specified herein, an installation permit shall be issued to the applicant for the installation of the work. Thereafter, when the work has been completed, it shall not be put in operation until a final inspection shall be made. If upon such inspection it is found that the terms of this ordinance have been complied with, a certificate of final completion shall be posted and a duplicate copy of same issued to the owner or his authorized agent by the Bureau of Building Inspection, as provided for herein. When said installation permit is granted, there shall be at-

tached thereto a copy of said plans and specifications, if such have been required to be filed.

Section 5. (a) Upon the filing of application for an installation permit, the Central Permit Bureau shall forthwith submit such application to such bureaus or commissions as have jurisdiction over the proposed work. If it shall be found that said application and the premises on which the proposed work is to be located conform to the laws and regulations governing such installation, then it shall be the duty of each of such bureaus or commissions to endorse approval upon such application and to transmit two copies thereof to the Central Permit Bureau, which Bureau shall forthwith issue the installation permit, and upon payment of the fee herein named, deliver it to the applicant. But if it shall be found that any such bureau or commission refuses to approve the application, the application shall be returned to the Central Permit Bureau with a statement of the reason for such refusal endorsed thereon.

Section 6. (a) All permits issued and certificates issued pursuant to this ordinance shall be kept displayed in a conspicuous place at or near where said appliance is installed. Installation permits shall be good for one year only; if installation is not begun within that period the permit becomes null and void.

Section 7. (a) Nothing in this ordinance shall be construed to apply to the inspection of any appliance when the installation of such appliance is under the supervision and control of the Railroad Commission of the State of California as provided in the Public Utility Act of the State of California, approved the 23rd day of April, 1915.

Section 8. (a) No fees shall be charged for the issuance of permits or certificates, or for the making of inspections of appliances when the same are to be used by the City and County of San Francisco, the State of California, or by the United States of America, except as herein provided.

Section 9. (a) High-pressure steam boilers shall be installed in accordance with the Code of the American Society of Mechanical Engineers as adopted by the Industrial Accident Commission of the State of California and/or its safety orders.



Section 10. (a) Low-pressure steam boilers shall be built and equipped in accordance with the Code of the American Society of Mechanical Engineers as adopted by the Industrial Accident Commission of the State of California and its safety orders. They shall be equipped with safety valves and with an automatic electric or mechanical device by which the fuel supply is cut off when the water falls below the safe working level or the pressure exceeds that predetermined, which in no case shall be in excess of 15 pounds per square inch gauge pressure.

Section 11. (a) Direct-fired hot-water heaters, except as otherwise stipulated in this section, shall be built and equipped to conform to the Code of the American Society of Mechanical Engineers as adopted by the Industrial Accident Commission of the State of California and its safety orders. In no case shall the stresses in the longitudinal joints of steel shells, while operating under maximum working pressure plus 10 per cent, exceed: for welded construction, 5600 pounds per square inch of cross-section if single vee welded and/or thickness of shell is less than  $\frac{1}{4}$  inch; 8000 pounds per square inch of cross-section if double vee welded and thickness of shell is  $\frac{1}{4}$  inch or over; for riveted or seamless construction, 11,000 pounds per square inch of net cross-section.

(b) If direct-fired hot-water heaters are made of cast iron, the maximum working pressure on such heaters shall not exceed that guaranteed by the manufacturer, less 10 per cent.

(c) If direct-fired hot-water heaters are made of other materials than cast iron or steel, then their construction shall conform to the safety orders of the Industrial Accident Commission of the State of California, but in no case shall the working stresses in the material exceed one-third the yield point.

(d) In no case shall a direct-fired hot-water heater be installed if constructed for a pressure of less than 60 pounds per square inch.

(e) Direct-fired hot-water heaters shall be equipped with:

(1) A water relief valve of ample relieving capacity, to prevent a rise of pressure in excess of 6 per cent,

when set to operate at the maximum working pressure plus 10 per cent.

(2) A heat-controlling device that will control the fuel supply and prevent the temperature of the heated water from rising in excess of 200 degrees Fahrenheit.

(3) A pressure gauge graduated to at least one and one-half times the allowable working pressure.

(4) An inspector's valved test gauge connection between the pressure gauge and the heater proper.

(5) Where the maximum City water pressure, as determined by the Bureau of Fire Prevention and Public Safety, at any time exceeds the maximum allowable pressure of the heater, a pressure-reducing valve shall be so installed as to reduce the incoming water pressure to that allowable on the heater.

(f) Coil heaters without additional storage capacity and self-contained heaters having a capacity of 45 gallons or less are excluded from the requirements of this ordinance.

(g) Self-contained heaters having a capacity of 45 gallons, equipped as provided in paragraph (e) of this section, are excluded from the requirements of this ordinance provided they conform to the following requirements:

(1) The water volume capacity does not exceed a total of 100 gallons.

(2) The inside diameter of any part or parts subject to internal pressure shall not exceed 30 inches.

(3) In the construction of such self-contained heaters the working stresses specified in this section shall not be exceeded, but in no case shall such heaters be constructed for a pressure of less than 60 pounds per square inch.

(4) The exterior of the container of such heaters shall bear a manufacturer's name plate. Such plate shall guarantee compliance with the requirements of this ordinance, or the manufacturer shall file with the Bureau of Building Inspection a guarantee of such compliance.

(5) The person, firm or corporation installing such self-contained heaters, before installation, shall file with the Bureau of Building Inspection a notification, on form to be supplied by said Bureau, which notifica-

tion shall state, among other things, the place of installation, the general description of installation and a warranty that the provisions of this ordinance are complied with.

Section 12. (a) Indirect-heated hot-water tanks shall be built and equipped to conform to the Code of the American Society of Mechanical Engineers as adopted by the Industrial Accident Commission of the State of California and its safety orders. In no case shall the stresses in the longitudinal joints of steel shells, while operating under maximum working pressure plus 10 per cent, exceed; for welded construction, 5600 pounds per square inch of cross-section, if single vee welded and/or thickness of shell is less than  $\frac{1}{4}$  inch; 8000 pounds per square inch of cross-section if double vee welded and thickness of shell is  $\frac{1}{4}$  inch or over; for riveted or seamless construction, 11,000 pounds per square inch of net cross-section.

(b) If indirect-heated hot-water tanks are made of other materials than steel, then their construction shall conform to the safety orders of the Industrial Accident Commission of the State of California, but in no case shall the working stresses in the material exceed one-third the yield point.

(c) In no case shall an indirect-heated hot-water tank be installed if constructed for a pressure of less than 60 pounds per square inch.

(d) Whenever an indirect-heated hot-water tank receives its heat or hot water from a coil or from a source of heat making possible a pressure in excess of that for which the tank is built, then such indirect-heated hot-water tank shall be equipped with:

(1) A water relief valve of ample relieving capacity to prevent a rise of pressure in excess of 6 per cent, when set to operate at the maximum working pressure, plus 10 per cent.

(2) If the source of heat supply is high-pressure steam, then a pressure-reducing valve must be installed on the steam line and be set to limit the pressure to that for which the tank is built.

(3) A heat-controlling device that will control the

temperature of the water and prevent it from rising above 200 degrees Fahrenheit.

(4) A pressure gauge graduated to at least one and one-half times the allowable working pressure.

(5) Where the maximum City water pressure, as determined by the Bureau of Fire Prevention and Public Safety, at any time exceeds the maximum allowable pressure of the tank, a pressure-reducing valve shall be so installed as to reduce the incoming water pressure to that allowable on the tank.

(e) Indirect-heated hot-water tanks having a water volume capacity of 45 gallons or less are excluded from the requirements of this ordinance.

(f) Indirect-heated hot-water tanks having a water volume capacity in excess of 45 gallons are excluded from the requirements of this ordinance provided they comply with the following requirements:

(1) The water volume capacity does not exceed 100 gallons.

(2) The inside diameter of any part or parts subject to internal pressure shall not exceed 30 inches.

(3) In the construction of such tanks the working stresses specified in this section shall not be exceeded, but in no case shall such tanks be constructed for a pressure of less than 60 pounds per square inch.

(4) Such tanks shall bear a manufacturer's name plate. Such plate shall guarantee compliance with the requirements of this ordinance, or the manufacturer shall file with the Bureau of Building Inspection a guarantee of such compliance.

(5) The person, firm or corporation installing such tanks, before installation, shall file with the Bureau of Building Inspection a notification, on form to be supplied by said Bureau, which notification shall state, among other things, the place of installation, the general description of installation and a warranty that the provisions of this ordinance are complied with.

Section 13. (a) Pressure tanks shall be built and equipped to conform to the pressure tank safety orders of the Industrial Accident Commission of the State of California.

(b) In no case shall they be so located as to be inaccessible for examination.

Section 14. (a) If for any reason pipe lines connected to appliances are to be tested in excess of one and one-half times the allowable pressure of such appliances, then such lines shall be blanked off from the appliances before the test is made.

Section 15. (a) The certificates to be issued as provided in this ordinance shall in large type specifically declare that it is unsafe to person or property to operate the appliance covered by the permit unless the safety devices specified herein are in place and operative. Such safety devices shall be specifically limited in the certificate to such as secure safety to person and property, and shall exclude any additional appliances as are not essential to such safety.

Section 16. (a) All inspections provided for in this ordinance shall be made by inspectors of boilers of the Bureau of Building Inspection of the Department of Public Works in conformity with the requirements of the Industrial Accident Commission of the State of California. The Superintendent of the Bureau of Building Inspection shall cause a certificate of final completion to be posted on or immediately adjoining the appliance or appliances inspected, and shall supply the owner or his authorized agent with a duplicate copy of same. This certificate shall be on forms furnished by the Department of Public Works, which forms shall state the date of final inspection, the location and description of the appliance or appliances, and shall be countersigned by the inspector of boilers making such inspection. The Bureau of Building Inspection shall file with the Industrial Accident Commission of the State of California, on forms furnished or approved by the Commission, such information in regard to the installations herein provided for as may be required by said Industrial Accident Commission.

Section 17. (a) The Department of Public Works is authorized and it is its duty, in cases where it has reason to believe that the safety of person or property is endangered by the defective operation of any appliances installed before the passage of this ordinance,



to cause an inspection to be made thereof. If such inspection shows that the safety of person or property is endangered by lack of, or failure to operate of, safety devices, then it shall be the duty of the Department of Public Works to shut down such appliances until such safety devices are installed, inspected, and a certificate of final completion issued. Such safety devices are to be limited; for low-pressure boilers, to safety valve or valves and automatic pressure reducer; for direct-fired hot-water heaters, indirect-heated hot-water tanks and pressure tanks, to relief valve or valves.

Section 18. (a) When the Department of Public Works makes, upon request, an inspection of any appliances which do not carry a permit or certificate, then such inspection and each inspection thereafter shall be made only after the payment in advance of the fee herein scheduled shall have been made to the Central Permit Bureau.

Section 19. (a) The provisions of this ordinance shall govern installations owned by the City and County of San Francisco. By proper bookkeeping entries the Bureau of Building Inspection shall be credited with the amount of the fee herein scheduled and the department for which the inspection is made shall be charged therefor.

Section 20. (a) For the purpose of defraying the cost of issuing permits and certificates pursuant to this ordinance, and of making the inspection herein provided, the following fees shall be paid prior to the issuance of such permit, certificate, or of making such inspection:

- (1) For high-pressure fire-tube boilers:
 

Diameter of 12 inches or less.....	\$ 2.00
Diameter of more than 12 inches, but less than 20 inches .....	5.00
Diameter of 20 inches or more, but less than 42 inches .....	7.00
Diameter of 42 inches or more.....	10.00
- (2) For high-pressure water-tube boilers:
 

Less than 300 sq. ft. of heating surface.....	8.00
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Single drum, 300 square feet or more, but less than 5000 sq. ft. of heating surface..	14.00
More than one drum, 300 square feet or more, but less than 5000 square feet of heating surface .....	20.00
5000 square feet or more of heating surface	100.00
(3) For low-pressure steam boilers.....	4.00
(4) For direct-fired hot-water heaters.....	4.00
(5) For indirect-heated hot-water tanks:	
Capacity of 100 gallons or less.....	3.00
Capacity of more than 100 gallons, but less than 250 gallons .....	4.00
Capacity of 250 gallons or more.....	5.00
(6) For pressure tanks:	
Diameter of 36 inches or less.....	3.00
Diameter of more than 36 inches.....	5.00
(b) For inspection made on request the fee shall be the same as herein scheduled.	

(c) Provided, however, that when more than one appliance is installed at the same location and at the same time, then the total fee charged shall be arrived at by taking the largest single fee and adding thereto one-half of the scheduled fee for each additional appliance installed.

Section 21. (a) If and when the Department of Public Works finds that any person, firm or corporation has, subsequent to the passage of this ordinance, installed any appliances without complying with the terms of this ordinance, it shall be the duty of said department to shut down the operation of the appliances so installed until inspection has been made and permit and certificate have been issued as provided herein. The fees in such cases shall be as follows:

(1) For high-pressure fire-tube boilers:	
Diameter of 12 inches or less.....	\$ 10.00
Diameter of more than 12 inches, but less than 20 inches .....	25.00
Diameter of 20 inches or more, but less than 42 inches .....	35.00
Diameter of 42 inches or more.....	50.00
(2) For high-pressure water-tube boilers:	
Less than 300 sq. ft. of heating surface	40.00

Single drum, 300 square feet or more, but less than 5000 sq. ft. of heating surface....	70.00
More than one drum, 300 sq. ft. or more, but less than 5000 square feet of heating surface .....	100.00
5000 sq. ft. or more of heating surface.....	500.00
(3) For low-pressure steam boilers.....	20.00
(4) For direct-fired hot-water heaters.....	20.00
(5) For indirect-heated hot-water tanks:	
Capacity of 100 gallons or less.....	15.00
Capacity of more than 100 gallons, but less than 250 gallons.....	20.00
Capacity of 250 gallons or more.....	25.00
(6) For pressure tanks:	
Diameter of 36 inches or less.....	15.00
Diameter of more than 36 inches.....	25.00

Section 22. (a) All ordinances or parts of ordinances in conflict with this ordinance are hereby repealed in so far as said conflict exists. No inspection shall be made on appliances except as herein provided.

Section 23. (a) In case any section or sections or part of any section of this ordinance shall be found to be unconstitutional or invalid for any reason, the remainder of this ordinance shall not thereby be invalidated, but shall remain in full force and effect.

Section 24. (a) This ordinance shall not be construed as imposing upon the City and County of San Francisco, or any official or employee thereof, any liability for damages to person or property which may occur from or in connection with any failure of any of the appliances herein named.

Section 25. (a) Any person, firm or corporation violating this ordinance shall be guilty of a misdemeanor, and upon conviction thereof shall be subject to a fine not exceeding \$500 or to imprisonment in the County Jail for a period not exceeding six months, or to both said fine and imprisonment; and each day that said violation shall continue shall be deemed a separate offense.

**Read Second Time and Finally Passed—Board of Supervisors, San Francisco, March 27, 1933.**

**Ayes—Supervisors Breyer, Canepa, Colman, Gallag-**

her, Havenner, Hayden, McSheehy, Miles, Peyser, Power, Roncovieri, Spaulding, Stanton—13.

Absent—Supervisors Brown, Shannon—2.

I hereby certify that the foregoing ordinance was finally passed by the Board of Supervisors of the City and County of San Francisco.

J. S. DUNNIGAN, Clerk.

Approved March 28, 1933.

ANGELO J. ROSSI, Mayor.

**Ordinance No. 223 (N. S.) Requiring All Private Water Tanks and Water Supplies to Be Connected so as the Fire Department May Use the Same for Protection from Fire, and Repealing Ordinance No. 96 (N. S.)**

Section 1. Any and all private water tanks and water supplies within, upon or about any building or premises capable of holding five thousand (5,000) gallons of water or over, shall be connected with a three (3) inch iron galvanized pipe leading from said water tank or water supply to a point outside of the building or premises designated by the Chief of the Fire Department.

Section 2. This Ordinance shall not apply to tanks used to supply automatic sprinkler equipments or to buildings which are supplied with hose reel standpipes of three (3) inches or larger, which lead from the water tank upon the roof or in the upper portion of the building supplying water to hose reels, providing said hose reel standpipes lead to a point outside the building designated by the Chief of the Fire Department.

Section 3. The outer end of all said pipes shall be connected with a three (3) inch gate valve, provided with cap and chain.

Section 4. Ordinance No. 96 (New Series), approved November 15, 1906, is hereby repealed.

Section 5. Any person, firm or corporation refusing to comply with any of the provisions of this Ordinance shall be guilty of a misdemeanor, and, upon conviction thereof, shall be punished by a fine not to exceed five

hundred (500) dollars or by imprisonment in the County Jail for not more than six (6) months, or by both such fine and imprisonment.

Section 6. This Ordinance shall take effect and be in force from and after its passage.

**Ordinance No. 698. Providing for the Regulation of the Placing, Installing, Operating and Use of Electric Wires, Appliances, Apparatus, Construction or Equipment Connected to the Fire and Police Telegraph and Telephone Signal Systems in, on or About Buildings in the City and County of San Francisco, and for the Charges of Such Regulation.**

Section 1. Every corporation, copartnership or individual placing, installing or causing to be placed or installed, electric wires, appliances, apparatus, construction or equipment in, on or about any building in the City and County of San Francisco, in connection with either or both of the Fire or Police Telegraph and Telephone Signal Systems as provided for in Section 5, Chapter IX, Article IX, of the Charter of the City and County of San Francisco, shall pay to the Department of Electricity for such installation, construction, equipment or connection, and the maintenance thereof, the following fees, viz:

For each installation or connection, and the construction and equipment thereof, to either or both of the Fire or Police Telegraph and Telephone Signal Systems .....	\$5.00
For the maintenance and use of each of such installation, construction, equipment or connection, per month .....	\$1.00
For the maintenance and use of each additional part of such installation, construction, or connection per month .....	\$0.50

Provided, however, that the charge for such installation, construction, equipment or connection, shall be due and payable at the office of the Department of Electricity upon the completion of said installation, construction, equipment or connection, and the charge for the maintenance or use for each of such installations or



connections, and additional parts thereof, shall be due and payable on the first of each and every calendar month.

Section 1a. In case the fees provided to be charged in Section 1 shall be less than the cost of making the necessary installation, then the entire cost of material and labor used in making such installation shall be paid by the person, firm or corporation in whose behalf the work is performed. All material so furnished or installed to be and remain the property of the City and County of San Francisco.—As added by Ordinance No. 1928 (N. S.)

Section 2. Upon the failure or refusal of any corporation, copartnership or individual to pay at the times specified herein, to the Department of Electricity, the charges as fixed herein, the Chief of the Department of Electricity shall, and he is hereby authorized to disconnect and remove the installation or connection and the construction and equipment thereof, of the corporation, copartnership or individual who shall have so failed or refused to pay said charges.

Section 3. It shall be the duty of the Chief of the Department of Electricity to turn all moneys received under this Ordinance into the Treasury of the City and County of San Francisco.

Section 4. Every corporation, copartnership or individual placing, installing, operating or causing to be placed or installed, or using electric wires, appliances, apparatus, construction or equipment connected with the Fire or Police Telegraph and Telephone Signal Systems of the Department of Electricity, shall appear in person or by duly authorized representative, at the office of the Department of Electricity and shall there register his name and address in said City and County, which act, upon being sworn, shall entitle him to a Certificate of Registration, which shall be his authority for being connected with said Fire or Police Telegraph and Telephone Signal Systems, provided, however, that no Certificate of Registration shall be granted for a period of more than one fiscal year or the unexpired portion thereof.

Section 5. It shall be unlawful for any corporation,

copartnership or individual to place, install, operate or cause to be placed, installed or operated, any electric wires, appliances, apparatus, construction or equipment in, on or about any building of the City and County of San Francisco, having connection or being connected with the Fire or Police Telegraph and Telephone Signal Systems, without first obtaining a Certificate of Registration from the Department of Electricity, as provided herein, and said Certificate of Registration must be renewed within thirty days after the first day of July of each fiscal year.

Section 6. All material furnished and all work done in construction, reconstruction and repairs of all installations and connections as aforesaid made under the provisions of this Ordinance, shall be by the Department of Electricity, and said material, construction and equipment shall be and remain at all times the property of said City and County.

Section 7. This Ordinance shall not be construed to relieve from or lessen the responsibility of any person being connected as aforesaid, for damages to any property or to any one injured by any defect therein; nor shall the City and County be held as assuming any such liability by reason of said Certificate of Registration issued by the Department of Electricity.

Section 8. Any corporation, copartnership or individual, or any officer or agent thereof, violating any of the provisions of this Ordinance, shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be fined not more than one hundred (100) dollars or be imprisoned for not more than ninety (90) days, or by both such fine and imprisonment.

Section 9. All Ordinances or parts of Ordinances, in so far as they conflict with the provisions of this Ordinance, are hereby repealed.

Section 10. This Ordinance shall take effect and be in force on and after its passage.

Section 11. The charge of installation, maintenance and use of such installation and each additional part of such installation, shall not apply to the members of the San Francisco Fire Department, the employees of the

Department of Electricity, the Fire Marshal, the Underwriters' Fire Patrol and Inspection Bureau, the offices of the Pacific States Telephone and Telegraph Company, and the headquarters of the Veteran Volunteer Firemen's Association.—**New section added by Ordinance No. 963; amended by Ordinance No. 1047.**

**Ordinance No. 896, (N. S.) Regulating the Erection, Establishment and Maintenance of Cupola Furnaces, or Other Appliances for Melting Iron or Any Other Metal.**

Section 1. It shall be unlawful for any person, firm or corporation hereafter to erect, establish, conduct or maintain a cupola furnace, or other appliance for melting iron or any other metal within the City and County of San Francisco, without the permission of the Board of Supervisors of the City and County of San Francisco.

Section 2. Whenever application is made to the Board of Supervisors of the City and County of San Francisco by any person, firm or corporation to erect, establish or maintain a cupola furnace, or other appliance for melting iron or any other metal, the applicant shall cause to be posted conspicuously on the premises a notice to the effect that application has been made to the Board of Supervisors for the granting of such a permit; said notice to be posted immediately after the filing of the application, and to be kept posted until said application is finally granted or denied.

Section 3. Any person, firm or corporation who or which shall violate any of the provisions of this Ordinance shall be guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine not exceeding five hundred (500) dollars, or by imprisonment in the County Jail for a period not exceeding six (6) months, or by both such fine and imprisonment.

Section 4. This Ordinance shall take effect immediately.

**Ordinance No. 3108. (N. S.) Regulating the Establishment and Maintenance of Automobile Parking Stations.**

Section 1. An "Automobile Parking Station" is hereby defined to be:

A lot of land, otherwise vacant, on which automobiles may be placed or stored, and kept and maintained for public use and for which a charge is made for such placing and storing.

Section 2. It shall be unlawful for any person, firm or corporation to establish, equip or maintain an automobile parking station without first having obtained a permit therefor from the Board of Supervisors as provided by this Ordinance.

Section 3. Application for such permit shall be made in writing by the person, firm or corporation desiring the same and shall contain a description of the location of the premises sought to be used as such station, the dimensions of the lot and the name of the owner of the premises. Accompanying the application shall be a diagram of the lot wherein shall appear the entrances and exits, all structures, fences or other improvements intended, and the character of the floor to be placed therein, and the character of contiguous structures. A notice, printed in conspicuous type, signed by the Clerk of the Board of Supervisors, stating that application has been made for such permit and stating the date when such application would be heard by the proper committee of said Board, shall be conspicuously posted on the premises described in the application for at least ten days prior to the date of such hearing. All applications for parking permits shall be referred to the Fire Marshal for investigation and report thereon.

Section 4. **Repealed by Ordinance No. 3181 (N. S.)**

Section 5. No building or structure for the housing or storage of automobiles shall be erected or maintained on or in any automobile parking station as defined by this Ordinance.

Section 6. At the hearing of such application any person may object to the granting of such permit and may be heard in respect thereto.

Section 7. The Board of Supervisors may grant the permit applied for or may, in the exercise of a sound and reasonable discretion when the public interest may require, deny the same. All permits granted shall be revocable at the will of the Board.

Section 8. The following rules and regulations, to be

inserted in any permit granted hereunder, shall govern the maintenance of automobile parking stations and shall be strictly observed.

A. The lot on which such station is maintained shall be enclosed on all sides by a substantial fence, suitably painted, except where walls of buildings exist contiguous thereto, and such fence shall be not less than four nor more than twelve feet in height.

B. No automobile shall be placed within three feet of any building on adjoining land.

C. No automobile shall be operated or engine allowed to run except when entering or leaving the place.

D. There shall be constantly kept on hand at least four barrels of clean dry sand, placed in different parts of the station, each barrel to contain an iron scoop and available at all times for the extinguishment of fire and for absorbing any oil that may fall upon the floor. The use of sawdust for such purposes is forbidden.

E. The floor shall be of gravel, rock, earth, brick, or concrete.

F. No nuisance of any kind shall be permitted or committed on the premises. Proper toilets and urinals shall be provided whenever required by the Board of Health or Health Officer.

G. Exits and entrances shall be at least 15 feet in width.

H. The interior of the station shall be lighted so that it shall contain no dark or obscure places.

I. The station shall be kept in a clean and sanitary condition, and no additional fire hazard shall be permitted to be maintained.

J. The washing or repairing of automobiles shall not be allowed on the premises except that minor adjustments of motor cars may be made by the owner or chauffeur in charge thereof.

Section 9. Any person violating any of the provisions of this Ordinance shall be guilty of a misdemeanor, and upon conviction thereof shall be subject to a fine of not less than ten dollars nor more than one hundred dol-



lars, or by imprisonment in the County Jail for not more than thirty days, or by both such fine and imprisonment.

Section 10. This Ordinance shall take effect immediately.

**Ordinance No. 1510 (N. S.) Regulating the Installation and Operation of All Electrical Apparatus and Appliances Used in the Conduct, Operation and Maintenance of Moving Picture Exhibitions in the City and County of San Francisco.**

Section 1. All electrical appliances and apparatus used in connection with or necessary for the operation of moving picture exhibitions, shall, with the exception of that provision relating to and restricting the use of motors for the purpose of operating moving picture machines, be in conformity with the rules and regulations set forth in what is known as "National Electrical Code," said code being rules and requirements for the installation of electrical wiring and apparatus for electric light, heat and power, as the same are now established, and the said rules and regulations together with amendments and changes made therein from time to time, and also any rules and regulations now established or that may be made from time to time by the Department of Electricity of the City and County of San Francisco, are hereby adopted and approved.

Section 2. It shall be unlawful for any person, firm, corporation or association to install, cause or permit to be installed, or operated any motor or other device to operate a moving picture machine until a permit in writing therefor has first been granted by the Chief of the Department of Electricity, said permit to be posted in a conspicuous place in the operating room where said motor is being used, provided said permit shall be granted in all cases where the installation of the motor and the wiring thereof shall conform to all ordinances of the City and County of San Francisco.

Section 3. Permits to operate a moving picture machine with the aid of a motor shall be issued in the name of the owner or owners, shall not be transferable

and may be revoked by the Chief of the Department of Electricity for any of the following reasons:

A. Failure of the person, firm, corporation or association to whom the permit is issued to maintain the electrical appliances and apparatus at a standard as required by the "National Electrical Code" and the Department of Electricity.

B. Failure of the person, firm, corporation or association to remedy within five (5) days any complaint on the electrical appliances and apparatus within or about the premises in which the moving picture exhibition is given.

C. Violation of the rules of the Department of Electricity of the City and County of San Francisco.

Section 4. It shall be unlawful for any person, firm corporation or association to keep locked during the hours in which a moving picture exhibition is open to the public the door or entrance to the booth or room within which the moving picture machine is operated.

Section 5. A. The operator must familiarize himself with the use of all the devices installed for the operation of the electric current in the operating room and the closing of all openings from the operating room into the main auditorium, and must see that all these devices are kept in perfect working order.

B. No waste paper, newspapers, old cloths, rags or anything of an inflammable character will be permitted in the operating room, provided, however, that this section shall not be interpreted to govern inflammable film when same are in course of operation or enclosed in an approved metal box.

C. The walls and floor of the operating room must at all times be kept clean, and no dust, dirt or other rubbish shall be allowed to accumulate.

D. Waste or wiping rags will not be permitted in the operating room unless kept in approved metal box.

E. An approved metal can or metal bucket, partially filled with water, must be placed in each operating room for the reception of waste carbon.

F. The operating room must not be used as a store-room, and no material whatsoever other than that re-

quired for the immediate operation shall be kept therein.

G. Under no circumstances shall the operator leave the operating room while a picture, slide or transparency is being exhibited, nor leave the operating room during an intermission, without first having disconnected the current from the arc lamp of the moving picture machine.

H. Burnt-out fuses must not be refilled or used, and no other fuses than Standard Fuses, approved by the "National Electrical Code" shall be used.

I. Approved protective devices, namely, fireguards, to protect open film coming from upper magazine and fireguards to protect open film coming into the receiving magazine, as well as automatic drop shutter to cover the aperture plate on the gates of all the moving picture machines must be provided.

J. It shall be unlawful for any person who is not at least twenty-one (21) years of age to operate a moving picture machine by motor in any place of public assemblage.

K. It shall be unlawful for any person, firm, corporation or association to employ for the purpose of operating a moving picture machine by motor in any place of public assemblage any person who is not at least twenty-one (21) years of age.

L. It shall be incumbent upon the owner of any place of public assemblage in which moving pictures are exhibited, or his, or its representatives, to visit the operating room at least once a week to see that the requirements of this Ordinance relative to the condition of the room are carried out, failure to do so placing the responsibility upon the employer or his or its representatives.

Section 6. Any person or persons, firm, corporation or association who shall violate any of the provisions of this Ordinance shall, upon conviction thereof, be subject to a fine of not less than five (5) dollars, or more than one hundred (100) dollars, or by imprisonment in

the County Jail for not more than six (6) months, or by both such fine and imprisonment.

Section 7. All orders or ordinances or parts of orders or ordinances in conflict with the provisions of this Ordinance are hereby repealed.

Section 8. This Ordinance shall take effect and be in force from and after its passage.

**Ordinance No. 1543. (N. S.) Providing for the Lighting of Places of Amusement Where Moving Pictures Are Exhibited.**

Section 1. All places of amusement wherein moving pictures are exhibited for public entertainment and where an admission fee is charged shall, during the hours that the same be open to the public, be kept lighted and illuminated in an amount of light equal to the light diffused or radiated from six thirty-two candle power incandescent lights at a voltage of one hundred and ten, with a resistance of four hundred and forty ohms per lamp, in a room containing twelve hundred and fifty square feet of floor surface; provided, that in all such places of amusement hereafter to be constructed, erected or altered, such incandescent lamps shall be set a distance apart of not less than seven feet.

Section 2. Nothing herein contained shall require the use of electricity for the purpose of illumination, the reference to the same being put for the purpose of establishing the amount of light necessary in a room containing the number of square feet above set forth. If any place of amusement of the character above set forth contains less than twelve hundred and fifty square feet of floor surface, then the amount of light but not the degree of light may be reduced accordingly. If said places contain more than twelve hundred and fifty square feet, the amount but not the degree of light shall be increased accordingly.

Section 3. Every person, firm or corporation violating the provisions of this Ordinance shall be deemed guilty of a misdemeanor and upon conviction thereof shall be punished by a fine not exceeding \$500 or by imprisonment in the County Jail not exceeding six months, or by both such fine and imprisonment.

**Ordinance No. 990. (N. S.) Regulating the Installation and Maintenance of Wires Used for the Carriage of Electricity for Light, Power, Telephone, Telegraph, Messenger, or Signal Service Installed in Buildings Within the Fire Limits of the City and County of San Francisco.**

Section 1. All wires hereafter installed in or on buildings or other structures within the fire limits of the City and County of San Francisco, and used for conducting electricity, shall be enclosed as thus installed in "National Code Conduit," or other approved armored conductors; provided, however, that such wires when used for telephone, telegraph, district messenger, call bell or similar systems, are exempted from the foregoing provisions.

Section 2. This Ordinance shall not prohibit temporary installations of other methods of electrical construction for decorative or display purposes, and the Department of Electricity is authorized to grant special permission for such temporary installation for a period not to exceed sixty (60) days.

Section 3. Any person, firm or corporation, at any time installing wires in violation of the provisions of the foregoing sections shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine not to exceed five hundred dollars (\$500.00), or by imprisonment in the County Jail for not to exceed six (6) months, or by both such fine and imprisonment.

Section 4. All Ordinances and parts of Ordinances which conflict with the provisions of this Ordinance are hereby repealed.

Section 5. This Ordinance shall take effect and be in force 60 days after the date of its passage.

**Ordinance No. 2269 N. S. Repealed by Ordinance No. 6070 in Effect Without Mayor's Approval December 21, 1923.**

**Ordinance No. 4412. (N. S.) Regulating the Construction and Use of Buildings Used as Automobile Repair Shops; Regulating and Providing for the Storage of**



## Gasoline in Connection therewith; Safety Regulations for Automobile Repair Shops; Penalties.

Section 1. **"Definitions."** The following terms shall have the following meaning wherever used in this Ordinance.

(A) "An automobile repair shop," is a building where one or more automobiles of any make, size or description are taken into said building and a charge is made for repairing any part of the motor, engine, or any part of the machinery or driving part connected with the motor engine in any manner.

(B) "Gasoline," shall mean any product of petroleum that will flash or emit an inflammable vapor below a temperature of one hundred and ten (110) degrees Fahrenheit. The Fire Marshal shall decide the flash-point.

(C) "Approved" shall mean approved by the Fire Marshal.

Section 2. It shall be unlawful for any person or persons, firm, company or corporation hereafter, from the date of the passage of this Ordinance, to establish, conduct or operate an automobile repair shop where any part or portion thereof is used or occupied as a hotel, tenement house, apartment house, romeo flat, rooming house or lodging house, hall or place of public assembly.

Section 3. No automobile repair shop shall hereafter be established, conducted or operated, unless said automobile repair shop is constructed of brick or concrete, or of slow burning material, described as follows: The walls shall be of masonry, terra cotta or tile from the floor of the first story to the bottom of the upper or second story floor joists; if of one story in height, to the roof; the ceiling shall be of the same construction or of not less than one (1) inch of plaster on metal lath; all roofs shall be fireproof. The floor shall be of concrete. If desired a wood floor, of not more than one (1) inch in thickness may be laid on the concrete floor, where necessary to protect the workmen from the concrete floor.

No stairs shall lead from the inside of an automobile repair shop to the floor above, unless they be enclosed

with a fireproof partition from floor to ceiling. with a fireproof door.

All windows and skylights shall be of wire glass with metal frames; the skylight shall be secured so as to be easily removed by the Fire Department when necessary to extinguish a fire.

Section 4. Whenever any portion of a building occupied and used as an automobile repair shop at the time previous to the passage of this Ordinance shall become damaged by fire to the extent of more than twenty-five (25) per cent of its value above the foundation walls, said repair shop shall not again be operated as an automobile repair shop unless all that portion of the building so occupied as an automobile repair shop fulfills all requirements of this Ordinance and the same have been complied with; the said damage to be determined by the Board of Public Works.

Section 5. **"Storage of Gasoline."** This section shall apply to all automobile repair shops now being operated or hereafter to be operated. One approved five (5) gallon can of gasoline or distillate or fifty (50) gallons of gasoline or distillate kept in an approved portable filling tank, commonly called a gasoline buggy, may be stored or kept inside of an automobile repair shop.

One storage tank of gasoline or distillate with a capacity not greater than three hundred (300) gallons, may be stored outside of an automobile repair shop, close to the curb line of the sidewalk; the top of said storage tank shall be at least four (4) feet below the sidewalk, the space between the top of the tank and the sidewalk shall be filled with earth.

The approved portable filling tank or buggy and the storage tank shall be constructed of not less than No. 12 U. S. Standard Gauge, galvanized steel oxy-acetylene or electric welded, or riveted steel to steel joints, with rivets not more than one (1) inch apart from the centers; the approved portable filling tank or buggy shall be mounted on all metal wheels with rubber tires. Or they may be constructed of iron not less than three-sixteenths ( $3/16$ ) of an inch in thickness, riveted and caulked. The portable filling tank or buggy shall be soldered and painted; the storage tank shall be covered with rust-resisting material.

All pipes shall lead out of the top of the storage tank, consisting of a filling pipe, suction pipe and a one (1) inch vent pipe; the vent pipe shall extend up in front of the building capped with return bend covered with a fine brass wire mesh. All pipes shall be galvanized. All storage tanks and portable filling tanks or buggies must be approved.

No storage tank shall be covered with earth until inspection has been made, or permission granted to do so by the Fire Marshal.

The gasoline or distillate shall be pumped from the storage tank and the approved portable filling tank or buggy. No gravity, syphon or pressure system of any kind shall be allowed in removing the gasoline or distillate from the storage tank or from the approved portable filling tank or buggy. All pumps to be close valved.

Before any gasoline or distillate shall be stored in, upon or about any automobile repair shop, application must be made to the Fire Marshal, naming the number of gallons desired; the Fire Marshal shall grant the application, provided the applicant complies with all of the provisions and requirements of this Ordinance.

All storage tanks and portable filling tanks or buggies must be filled in the day time. In no case shall any barrel or drum of gasoline or distillate, empty or otherwise be allowed in, upon or about the premises of an automobile repair shop.

**Section 6. "Safety Regulations."** This section shall apply to all automobile repair shops now being operated or hereafter to be operated.

The approved portable filling tank or buggy shall be kept at all times near a door leading into the street, so as to be readily removed from the premises in case of fire.

(A) Under no condition shall any gasoline or distillate be permitted for any purpose to remain over night in any open can or receptacle.

(B) At least four (4) iron buckets filled with dry sand shall be kept on hand at all times, placed in different parts of the automobile repair shop, easy of access, so as to be readily thrown upon a gasoline or oil

fire. Also sand shall be used for absorbing oil that may fall upon the floor; such sand when saturated shall be removed from the premises. The use of sawdust for absorbing oils or gasoline is strictly prohibited.

(C) All oily waste, rags or rubbish of any kind shall be kept at all times in metal receptacles with tight fitting covers.

(D) No gasoline or distillate shall be put into or taken out of any automobile near which there is an open light or fire of any kind.

(E) No gasoline or distillate shall be used for motive power to supply any engine or operate any machinery to be used for the repairing of automobiles.

(F) No light of any kind other than electricity shall be used for illuminating purposes. All portable electric bulbs shall be protected with a strong wire covering.

(G) All electric motors not actually a part of an automobile shall be located at least four (4) feet above the floor.

(H) Not less than one (1) chemical fire extinguisher, of not less than three (3) gallons capacity, or other fire extinguishers which have been approved, shall be kept at all times where easy of access, in good condition, in every automobile repair shop.

(I) All machinery of an automobile must be shut off and the motor dead, and all lights of an automobile extinguished, while gasoline or distillate is being put into or taken out of the reservoir of an automobile.

Section 7. It shall be the duty of any and all members of the Board of Fire Wardens to see that all of the provisions and regulations of this Ordinance are strictly complied with, and for that purpose shall have access at all times to any and all buildings operated as automobile repair shops.

Section 8. **"Penalty."** Any person or persons, firm, company or corporation that violates, disobeys or refuses to comply with any of the provisions or requirements of this Ordinance shall be deemed guilty of a misdemeanor, and, upon conviction there of, shall be punished by a fine of not less than ten (10) dollars nor more than fifty (50) dollars or by imprisonment in

the County Jail for not more than thirty (30) days, or by both such fine and imprisonment, and such person, firm, company or corporation shall be deemed guilty of a separate offense for each and every day that such violation, disobedience or refusal shall continue and shall be subject to the penalties imposed by this Ordinance for each and every separate offense

**Ordinance No. 4537. (N. S.) Regulating the Storage of Combustibles and Acids and Repealing Ordinance No. 2351 (N. S.)**

Section 1. No tenement house, apartment house, hotel, lodging house, rooming house, hall or place of public assembly, nor any part thereof, nor the lot upon which is situated, shall be used as a place of storage, keeping or handling of any explosives, inflammable oils, hay, straw, excelsior, paper stock, feathers or rags. This section shall not apply to drug stores, wherein explosives and inflammable oils are kept and stored for sale for medicinal purposes.

Section 2. No person, firm, company or corporation shall store or keep in any building more than one carboy of nitric, muritic or sulphuric acid, unless the same be stored and kept in a fireproof acid room, the walls of which shall be constructed of brick, concrete, terra cotta or tile from the floor to the bottom of the floor joists above; the ceiling shall be of the same construction, or of not less than one inch of plaster on metal lath. All swinging doors shall be arranged to swing outward and to close automatically; sliding doors shall overlap the wall at least four inches at sides and top. There shall be a sill constructed of brick or concrete, rising not less than nine inches from the floor. The floor shall be of concrete and where possible shall be connected with the sewer with an iron-stone pipe. Where it is impossible for a basement to be connected with the sewer, a sump shall be constructed at the lowest point of the acid room, capable of containing two carboys of acid. All doors shall be covered with galvanized iron on both sides, or may be constructed according to the fire door requirements of the Board of Fire Underwriters of the Pacific. All windows shall be of wire glass not less than one-quarter inch



thick, set in metal frames or wood frames covered with galvanized iron. All acid rooms shall be vented to the open air. If the acid room is in a basement the ceiling shall be connected with a floor pipe casing, passing through the first floor and ceiling. All acid rooms shall be protected on the inside by a sprinkler system, or in lieu of the sprinkler system, a sprinkler head or open spray shall be located in the center of the ceiling, connected with a one-inch water pipe with a valve, such valve to be located on the outside of said acid room as designated by the Chief of the Fire Department.

This section shall not apply to manufacturers of acids.

Whenever acid is stored in an open lot, said lot shall be enclosed with a fence.

All acid rooms shall be plainly lettered on the outside with letters not less than three inches, "ACID STORAGE."

Section 3. Any person, firm, company or corporation who shall violate or refuse to comply with the provisions of this Ordinance shall be guilty of a misdemeanor and upon conviction thereof shall be punished by a fine of not less than ten dollars nor more than one hundred dollars, or by imprisonment in the County Jail for not more than three months, or by both such fine and imprisonment; and each such person, firm, company or corporation shall be deemed guilty of a separate offense for every day such violation or refusal shall continue, and shall be subject to the penalty for each and every separate offense.

Section 4. Ordinance No. 2351 (New Series), approved July 9, 1913, is hereby repealed.

**Ordinance No. 5443, (N. S.) Prohibiting the Storage, Manufacture, Sale or Discharge of Fireworks, Firecrackers, Torpedos, or Any Similar Agency That Creates Noise or Fire Within the City and County of San Francisco.**

Section 1. It shall be unlawful for any person or persons, firm, company, corporation or association to store, manufacture, sell or discharge any fireworks, firecrackers, torpedoes or any similar agency that creates noise or fire within the City and County of San

Francisco; provided, however, that public display of fireworks may be given with the joint written consent and under the supervision of the Fire Marshal and Chief of Police.

Section 2. Fireworks or firecrackers imported from foreign countries for transshipment may be temporarily stored while in transit in such bonded warehouses as may be designated by the Fire Marshal.

Section 3. Any person or persons, firm, corporation or association who or which shall violate any of the provisions of this ordinance shall be guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine not to exceed five hundred dollars, or by imprisonment in the County Jail for a period not to exceed six months, or by both such fine and imprisonment.

Section 4. All ordinances or parts of ordinances, in so far as they conflict with this ordinance, are hereby repealed.

**Ordinance No. 5754, (N. S.) Regulating the Manufacture, Printing, Developing, Keeping, Storing or Use of Motion Picture Films.**

**SECTION A—General.**

1. It shall be unlawful for any person, firm or corporation to manufacture, print, develop, keep, store or use nitro-cellulose motion picture films, whether in the form of negatives, raw stock, finished product, or discarded scrap, or used films in any building or place within the limits of the City and County of San Francisco, without first obtaining a written permit therefor, as hereinafter provided.

2. Any person, firm or corporation desiring to manufacture, print, develop, store, keep or use motion picture films in any building or place within the City and County of San Francisco shall file with the Fire Marshal a written application for a permit to do so, which application shall set forth the name, residence or place of business of the applicant and the location at which it is desired or intended to manufacture,

print, develop, store, keep or use such motion picture films. Forms for such application shall be furnished by the Fire Marshal. Also see Ord. 8802 (N. S.), app. July 17, 1930.

3. Upon the receipt of such application the Fire Marshall shall make an investigation to determine whether or not the building or place defined in the application is so situated, arranged and constructed as to comply with the provisions of this ordinance.

4. If the Fire Marshal shall find that the building or place is not so constructed, arranged or equipped, or if he shall find that the desired use will conflict with or be contrary to the provisions of this ordinance, he shall refuse to grant the permit.

5. The Fire Marshal shall frequently inspect all buildings or places containing motion picture films, to determine whether the provisions of this ordinance are being complied with, and it shall be his duty to enforce the provisions hereof.

6. The Fire Marshal shall have power to revoke or suspend any permit granted under the terms of this ordinance for violations of any of its provisions.

7. When films of the non-inflammable variety are stored, kept, used or worked upon, the requirements of this ordinance may be waived in whole or in part by the written consent of the Fire Marshal. All of the provisions of this ordinance shall, however, apply where both the inflammable and non-inflammable films are stored, kept, used or worked upon.

8. Nothing in this ordinance contained shall be construed as prohibiting the keeping and using of motion picture films for exhibition or reviewing purposes in authorized motion picture theatres; provided not more than those actually in use of a maximum of twenty reels of film are kept in any one such theater at any one time. The reviewing of pictures in theatres is prohibited, except in reviewing rooms in buildings of Class "A" construction, which reviewing rooms shall be fireproof, ventilated directly to the exterior of the building and have no direct connection with the auditorium. All reels other than in projecting machine

shall be kept in closed and approved metal containers, located in a projection machine booth constructed and maintained as required by the Building Law of the City and County of San Francisco.

#### SECTION B—Definitions.

1. Wherever in this ordinance used, the terms “motion picture film” and “motion picture films” shall be understood to mean films composed of nitro-cellulose or pyroxylin-plastic material or of other inflammable composition.

2. The term “standard reel” wherever in this ordinance used shall be understood to mean approximately one thousand (1000) feet of motion picture film, approximately one and eleven-thirty-seconds (1-11/32) inches in width and .0055” in thickness, weighing approximately five (5) pounds.

3. The term “Exchange” means an establishment or place in a building used for handling, packing, shipping, storing, inspecting, rewinding or repairing film in connection with the distribution of film.

4 The term “Laboratory” means an establishment or place in a building used for the perforation, printing, development, washing, fixing, drying, assembling, polishing, finishing or other operations connected with the production of either motion picture negatives or positives.

5. The term “Film Vault” means a separate room, compartment, vault or inclosure constructed and equipped in accordance with the requirements of this ordinance.

#### SECTION C—Building and construction.

1. No part of the operation of a motion picture exchange shall be conducted in any building:

(a) Which is more than two stories high.

(b) Which is not of Class “A” or “B” construction.

(c) Any part of which is occupied, used or intended to be occupied or used as a place of assembly, habitation, refuge or detention, or as an office building, workshop or factory in which more than fifty people

not connected with the motion film exchange are employed.

2. Door or window openings in exterior walls of a building occupied as a film exchange shall be made fireproof, except where such door or window openings face on streets which are not less than fifty feet wide from property line to property line.

3. No permit shall be issued to manufacture, print, develop, keep or store motion picture films in any basement, except where a direct exit not less than five feet wide and on a level with a street or alley to which it terminates is provided. Where it is desired to use the basement for storage other than motion picture films, the emergency exit hereinbefore referred to may be omitted when at least two stairways leading from the basement to the first floor and located at opposite ends of the building are provided. In addition to these stairways, an emergency exit shall be provided from the basement to a sidewalk opening in front of the building, the approach to which shall be of fire proof materials, the sidewalk opening not less than 3'x5' over which shall be placed iron trap doors accessible to operation from the outside. The lock securing these doors shall be of a type and workmanship approved by the Fire Marshal and be made accessible to the Fire Department from the outside by means of a traffic-bearing glass guard placed in one of the doors directly over the lock. Where a projecting room is located in a basement, an additional five foot emergency exit opening directly on a street or alley and on the same level of said street or alley, shall be required for such projecting room. This provision shall apply only to film exchanges.

4. The storage or use of motion picture films in the projecting room shall be limited to one picture, or feature, and film not being actually shown shall be kept in closed approved containers in the projecting room or booth.

#### SECTION D—Storage.

1. All films when not in use or not being worked upon shall be kept in approved shipping cases or in-



dividually inclosed metal containers with tight covers, and shall be stored in fireproof vaults.

2. Walls and floors of vaults shall be of brick or re-inforced concrete. If of brick, not less than eight (8) inches thick laid in cement mortar, and if of re-inforced concrete not less than six (6) inches thick. No wood top flooring shall be used. Size of vault shall not exceed 750 cubic feet.

3. The roof of vault shall be an independent re-inforced concrete roof at least six inches thick. In a fireproof building where the floor above is equivalent to this it may serve as the roof if side walls are rigidly tied into it; in construction of this type, a false ceiling constructed of metal lath and cement plaster one inch thick, or the equivalent, and with no openings to the concealed space above may be used to limit the total interior vault space to 750 cubic feet. Vent may extend through this false ceiling and concealed space.

4. Each face of the wall on door opening into vault shall be protected by a standard fire door constructed in accordance with specifications of the National Board of Fire Underwriters. The inner door shall be so arranged and installed as to close automatically in case of fire originating within the vault. The outer door shall be of the swinging type and be made to close into a rabbit; it shall be self-closing; and if fastened open, shall be arranged to close automatically in case of fire originating in or out of the vault. Both of these doors shall be equipped with an Underwriters' approved heat actuated device in conjunction with an Underwriters' approved automatic release, which shall so function as to positively assure the closing of the fire doors in advance of the fusing of the sprinkler heads. The inner door may be left open during the time the film exchange is in active operation, but must be closed at night or during other inactive periods.

5. Racks in film vaults shall be built of metal or other incombustible material and arranged to prevent film containers being placed in other position than on edge in a vertical position. Vertical incombustible partitions, equivalent in heat insulation and durability

to  $\frac{3}{8}$ -inch hard asbestos and extending from floor to ceiling shall be provided to divide racks into sections such that the amount of film protected by any sprinkler shall not exceed 830 lbs. Partitions shall be substantial and have exposed edges protected. Means shall be provided to keep the container on each side of such partitions an inch away from same. Racks shall not obstruct any vent openings. Racks shall be so arranged that film cannot be placed under or between containers in the vertical position. Films shall not be stored or kept on the floor, unless in shipping containers approved by the Interstate Commerce Commission.

6. All lights in film vaults shall be at the ceiling and of the fixed marine type, with vapor-proof globes and conduit wiring subject to the approval of the Department of Electricity. All switches shall be out side the vault and shall be arranged with a small pilot light to indicate on outside of vault whether vault lights are on or off. No artificial heat shall be permitted in the vault.

7. Each vault for the storage of motion picture films shall be vented separately to the outside air by a vertical vent through side, and, or direct through ceiling; such vault shall have a sectional area ratio of not less than 1400 square inches for a standard vault of 750 cubic feet capacity. The vent duct shall be constructed of reinforced concrete not less than 6 inches in thickness and shall extend vertically to a point not less than 4 feet above the roof. Where opening to vent flue is vertical in vault wall and glass to protect same is used in sash, sash shall be arranged to open automatically in case of fire by the use of the releasing device in conjunction with operation of doors.

8. Each vent opening shall be protected against the weather by single thickness of glass one-sixteenth inch thick, painted a dark color, or by other incombustible fragile material. The area of the glass shall be the effective sectional area of the vent opening. No pane of glass shall be smaller than 200 square inches. Any protection equivalent to the above may be accepted in lieu thereof.

9. A light wire screen not coarser than one-eighth inch mesh shall also be placed over each vent, so arranged as not to interfere with the automatic operation of the sash. Bars or screen designed to prevent burglary or injury to contents shall not have a mesh of less than 4 inches, shall be locked inside the light wire screen and shall give a net opening of not less than 1400 square inches.

10. A permanent guard shall be installed to prevent films from being forced against the vent openings of small containers. Where film vaults are subdivided by incombustible partitions, each subdivision shall have an opening to the vent duct not less than two feet 11 inches by one foot 8 inches, but vents from two or more vaults must not connect. There shall be no opening in any vaults except the vent openings and drains. Each vault shall be provided with a drain basin placed in floor of not less than 36 square inches area with a take-off pipe of adequate size not less than 4 inches, connecting as direct as possible with the sewer.

11. No vault used for the storage of motion picture films shall directly communicate with any examination room, shipping room, projecting room, or cleaning room, but shall be approached through an anteroom, passageway or vestibule separated from the rest of the building by tight partitions, floor and ceiling of incombustible material which shall contain no glass other than wire glass. All doors leading to said anteroom, passageway or vestibule shall be of tin clad construction at least one and one-half inches thick and be self-closing; doors may have wire glass panel, minimum size of which shall not be less than 3 square feet and maximum size of which shall be 6 square feet.

#### SECTION E—Handling.

1. Examining and repairing of films shall be done only in an "Examination Room" or "Inspection Room" having ventilation direct to open air and separated from the rest of the building by tight partitions, floor and ceiling of incombustible materials, which shall contain no glass other than wire glass except where

the glass faces on a street not less than fifty feet in width and all doors leading to examination room shall be of tin clad construction at least one and one-half inches thick and be self-closing

2. Examination room shall be provided with at least two exits so located as to preclude the possibility of both being shut off by fire in this room, the shipping room, the cleaning room and the vault. Each doorway shall be equipped with a self-closing door of tin clad construction, at least one and one-half inches thick opening outward and closing into incombustible stops. An approved outside stairway fire escape, with balanced extension reaching to the ground, readily accessible from the examination room through a doorway in the outside wall, may be accepted as constituting one of the above required exits.

3. Examination room shall not be used for storage nor handling of combustible materials other than films, and all furniture and fittings shall as far as practicable be of incombustible material.

4. The number of reels in the examination or inspection room shall not exceed one feature for each operator and all reels except one reel for each operator while under examination in this room shall be in closed approved metal containers.

5. Examination or inspection room shall be heated only by hot water or steam and metal shields or screens shall be provided to prevent the films from coming in contact with radiators or heated pipes.

6. All scrap or waste shall be kept under water, in self-closing, standard metal waste cans or their equivalent, and removed from the building at least once each day to a safe location; such waste to be kept separate from paper waste or other rubbish. Clippings, chips and waste film shall not be burned within 200 feet of any building.

7. Each examiner may be provided with not to exceed two ounces of any compound of collodion and amyl acetate or similarly inflammable cement, and all such cement in excess of the foregoing amount shall

be kept in the vault or as otherwise directed by the Fire Marshal; in no case shall more than one gallon be kept on the premises.

8. The examination room, anteroom and shipping room shall be lighted with incandescent electric lamps in vapor proof globes, properly guarded.

9. Motors for the operation of rewinds or for other purposes shall be of the fully inclosed, non-sparking type and shall have no exposed live metal parts. All electric wiring shall be installed in metal conduit in conformity with the requirements of the Department of Electricity.

10. The packing of motion picture films for shipping or the unpacking of same shall be done only in a shipping room having outside ventilation and separated from the rest of the building by tight partitions, floor and ceiling of incombustible material with self-closing fire doors of tin clad construction at least one and one-half inches thick; partitions and doors to contain no glass other than wire glass.

11. The shipping room shall not be used for the storage or handling of combustible materials other than films and all furniture used therein shall as far as practicable be of non-combustible material. The number of exposed reels of films in the shipping room at any one time shall not exceed twenty. In all other respects the equipment of shipping room shall comply with the requirements for examination room.

12. Where a motion picture machine is used for projecting films for exhibition or reviewing purposes same shall be inclosed in a standard booth constructed in accordance with the requirements of the Building Law of the City and County of San Francisco. A so-called "portable booth" shall not, within the meaning of this ordinance, be considered as fulfilling this requirement.

13. The cleaning or washing of motion picture films in or by means of ether, alcohol or other inflammable or combustible volatile liquid, shall be done only in a cleaning room or laboratory having outside ventilation and separated from the rest of the building by



tight partitions, floor and ceiling of incombustible material with self-closing fire doors at openings. The receptacle containing the cleaning liquid shall be kept tightly closed except at apertures through which film passes during the process of cleaning and whole apparatus, including receptacle, drying reels, etc., shall be completely covered by a ventilating hood equipped with a duct leading to outside air and provided with a mechanically induced draft sufficient to keep the room free from objectionable vapors.

14. The cleaning room shall not be used for the storage or handling of combustible material other than films and there shall be no more than three exposed reels at any one time in this room. In all other respects the equipment of this room shall comply with the requirements of the examination room.

15. Perforating machines shall be equipped with an effective receptacle for catching chips, and also a reeling device.

16. Printing machines shall be equipped with reeling devices.

17. Joining, assembling and inspection tables shall be of noncombustible material. Tables shall be set four inches from any radiator. If lights under tables are used for examining, by transmitted light, light box shall be properly ventilated and so constructed that it does not become a receptacle for film scraps and dust.

18. None of the provisions of this ordinance shall be construed as prohibiting the use interchangeably of either the examination, shipping, projection or repair room for any of the processes necessary to the operation of a film exchange; provided that no two different processes are carried on simultaneously, and that the provisions of this ordinance applying to each process be complied with.

19. It shall be unlawful for any person, firm or corporation to take or carry into any building within the City and County of San Francisco or to carry or transport anywhere within such limits any motion picture film or films, unless the same be contained in a

metal box, can or other approved receptacle, with cover securely tied or otherwise fastened. Each such receptacle shall be conspicuously labeled as containing inflammable films.

#### SECTION F—Sprinklers and Other Protection.

1. All film vaults and vestibules, examination room, shipping room and cleaning room or laboratory, as required by the foregoing provisions of this ordinance, shall be equipped with a complete system of automatic sprinklers of a type and workmanship approved by the Fire Marshal.

2. In every vault of 750 cubic feet there shall be installed twelve automatic sprinklers arranged and installed to give uniform distribution, and a galvanized sheet metal baffle plate twelve inches in width shall be attached to the ceiling between sprinklers so that water from one sprinkler will not cool the solder of the fusible strut of any other sprinkler. Vaults of a smaller cubical content shall be equipped with automatic sprinklers on the basis of one sprinkler for each  $62\frac{1}{2}$  cubic feet of contents.

3. Sprinkler systems for film vaults shall be equipped with a  $\frac{3}{4}$ -inch drip line and valve which shall be used for weekly test. A recording pressure gauge attached to drip line will be acceptable in lieu of test. Extra sprinkler heads shall be required and number specified by the Board of Public Works for such places as drying drums, joing or assembling tables, receiving and distributing counters, and each compartment of a cabinet will hold more than fifty pounds of film and other places where an excessive amount of film is handled.

4. Each room in which motion picture films are manufactured, printed, developed, kept, stored or used, exclusive of vault, shall be equipped with  $2\frac{1}{2}$ -gallon chemical extinguishers, pails of water and pails of dry sand, the number of which shall be subject to the approval of the Fire Marshal.

5. No heating or cooking device or appliance using gas, oil or electricity, shall be installed or maintained

in any building used as a moving picture exchange or laboratory. No heating device of any kind shall be permitted to be installed in such a building unless such device is approved by the Fire Marshal.

6. It is hereby made a misdemeanor to smoke or carry a lighted cigar, cigarette, pipe or match in any room or vault mentioned in this Ordinance, and conspicuous "No Smoking" signs shall be posted in prominent places. Matches shall not be carried by any employe or other person. Each exit shall be marked "Exit" in letters not less than 6 inches high, or by an illuminated sign with letters of the same height.

#### SECTION G—Management.

1. Every motion picture studio, laboratory or exchange shall be in charge of a responsible executive, who is familiar with these Rules and Requirements, with the importance of fire prevention and with any local laws or ordinance. The executive shall, as a part of his duty, see that these rules are observed and that his employes are instructed as to fire hazards and the proper handling of motion picture films.

2. The provisions of this ordinance shall be construed to apply equally to buildings or places at present established for the manufacturing, printing, developing, keeping, storing or using of motion picture films; providing, however, that the Board of Public Works and the Fire Marshal jointly in their reasonable discretion may waive the reconstructing in whole or in part of vaults, examination rooms, shipping rooms, cleaning rooms and projecting rooms in such buildings or places existing at the time of the passage of this ordinance.

#### SECTION H—Penalty.

1. Any person, firm or corporation violating any of the provisions of this ordinance shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not less than fifty dollars nor more than five hundred dollars, or by imprisonment in the County Jail for a period of not less than 30 days

nor more than six months for each such offense, or by both such fine and imprisonment.

2. This Ordinance shall take effect immediately.

### **Ordinance No. 224. Providing for the Inspection of Steam Boilers.**

Section 1. Every person, association or corporation who has been, or who may hereafter be, granted permission from the Board of Supervisors to erect and maintain a steam boiler, or boilers, shall cause the same to be inspected by some competent engineer or boiler inspector every six (6) months, and shall file a certificate from said engineer or boiler inspector as to the condition and safety of said boiler, or boilers, with the Chief Engineer of the Fire Department immediately after said inspection.

Section 2. Every person, association or corporation violating any of the provisions of this Ordinance shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not more than five hundred (500) dollars or by imprisonment in the County Jail for not more than six (6) months, or by both such fine and imprisonment.

Section 3. All Orders and Ordinances and parts of Orders and Ordinances in so far as they conflict with the provisions of this Ordinance are hereby repealed.

Section 4. This Ordinance shall take effect and be in force from and after its passage.

Also see Boiler Ordinance 11.086.

### **Ordinance No. 228. Providing for the Inspection by the Fire Marshal of Gasoline or Vapor Engines.**

Section 1. Every gasoline or vapor engine erected and maintained in this City and County under permits heretofore or which may hereafter be granted by the Board of Supervisors, shall be inspected as to its safety, by the Fire Marshal, at least once every three (3) months. When found to be unsafe or dangerous to life and property, said official shall order all necessary repairs to be made forthwith; and upon the refusal

of any person, association or corporation operating or maintaining said engine or engines, to make the repairs ordered by the Fire Marshal, said officer shall immediately report such refusal to this Board, and the permit to operate and maintain the engine or engines complained of shall thereupon cease to be in force and effect and shall become null and void.

Section 2. This Ordinance shall take effect and be in force from and after its passage.

**Ordinance No. 247. Restricting and Limiting the Use of Fresh Water Supplied by the Spring Valley Water Company to the City and County of San Francisco and to the Inhabitants Thereof to Domestic Consumption and to Building and Fire Purposes Only; Prohibiting the Use Thereof for Unnecessary Flushing of Sewers, Washing of Vehicles, Washing of Sidewalks and Streets, and the Excessive Use Thereof in Gardens and Lawns; and Prohibiting the Use of Fire Hydrants by Persons Other Than Those Authorized by the Fire Department of the City and County.**

Whereas, The water supply of San Francisco furnished by the Spring Valley Water Company, particularly that of the Western Addition, is temporarily limited and decreased through the destruction of the mains leading to Lake Honda, and until the reconstruction of said mains it is of great importance that extreme care and economy be exercised in the use of fresh water for other than for domestic consumption and for building and fire purposes; now therefore

Be it Ordained by the People of the City and County of San Francisco as follows:

Section 1. The use of fresh water supplied the City and County of San Francisco and the inhabitants thereof by the Spring Valley Water Company is hereby restricted and limited to domestic consumption and to building and fire purposes only.

Section 2. The unnecessary flushing of sewers, washing of vehicles, washing of sidewalks and streets, and the excessive use in gardens and lawns by private in-



dividuals of fresh water supplied from the mains of the Spring Valley Water Company is hereby prohibited.

Section 3. No person other than one permitted by the Fire Department of the City and County of San Francisco shall use or draw water from fire hydrants connected with the mains of the Spring Valley Water Company.

Section 4. The Chief of Police is hereby directed to enforce forthwith the provisions of this Ordinance.

Section 5. Any person, association, firm or corporation violating any of the provisions of this Ordinance shall be deemed guilty of a misdemeanor and upon conviction thereof shall be punished by a fine not exceeding fifty (50) dollars or by imprisonment in the County Jail for a period not exceeding five (5) days, or by both such fine and imprisonment.

Section 6. This Ordinance shall take effect and be in force immediately.

### **Ordinance 273. Defining the Duties of the Fire Marshal in Connection with Privileges Granted for the Storage and Use of Crude Oil or Petroleum as Fuel.**

Section 1. The Fire Marshal be and is hereby authorized, empowered and directed to prescribe the necessary conditions which shall govern the exercise of special privileges granted for the storage and use of crude oil or petroleum as a fuel, by persons, firms and corporations in this City and County; also, to see that the conditions thus imposed are strictly conformed to by the respective petitioners. Furthermore, said Fire Marshal shall, upon the request of the respective petitioners, furnish them with a written or printed copy of the conditions so imposed by him, for their information and guidance as to the manner in which they will be permitted to store and burn crude oil or petroleum, and shall also furnish the Clerk of this Board with a copy of said conditions.

Section 2. This Ordinance shall take effect and be in force from and after its passage.

**Ordinance No. 527 Regulating in Certain Cases and Prohibiting in Certain Other Cases the Lighting of Bonfires.**

Section 1. It shall be unlawful for any person to kindle or light or cause to be kindled or lighted any bonfire on any public highway, street, alley or place paved with bituminous rock, asphalt or basalt blocks and it shall be unlawful to kindle or light a bonfire on any other character of public highway, street, alley or place, unless a written permit has been obtained from the Mayor so to do.

Section 2. It shall be unlawful for any person to kindle or light or cause to be kindled or lighted any bonfire on any vacant lot or other premises within the limits of the City and County of San Francisco unless the owner or lessee of said vacant lot or premises has first obtained from the Mayor a written permit so to do.

Section 3. Any person who shall violate any of the provisions of this Ordinance shall be guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine not exceeding \$500 or by imprisonment in the County Jail for not more than six months, or by both such fine and imprisonment.

Section 4. Ordinance No. 1024, approved October 27, 1903, and all provisions of any Ordinance in conflict with the provisions of this Ordinance are hereby repealed.

Section 5. This Ordinance shall take effect and be in force immediately.

**Ordinance No. 815. Prohibiting Injury to Lamp Posts, Hydrants or Trees Upon Public Streets.**

Section 1. It shall be unlawful for any person to hitch or fasten any animal to, or to place any placard or notice upon, or in anywise to injure any lamp post or hydrant, or any growing tree, upon any public street, or, without authority, to extinguish any public light.

Section 2. Any person who shall violate any of the provisions of this Ordinance shall be guilty of a mis-

demeanor and, upon conviction thereof, shall be punished by a fine not to exceed five hundred (500) dollars, or by imprisonment in the County Jail for not more than six (6) months, or by both such fine and imprisonment.

Section 3. This Ordinance shall take effect and be in force immediately.

**Ordinance No. 831. Prohibiting the Smoking of Any Cigar, Pipe or Cigarette, or the Burning of Tobacco, by Any Person on Any Wooden Wharf, Pier, Quay or Bulkhead in the City and County of San Francisco.**

Section 1. It shall be unlawful for any person, on or upon any wooden wharf, pier, quay or bulkhead of the City and County of San Francisco, to smoke any cigar, pipe or cigarette, or to burn tobacco, in any manner whatsoever.

Section 2. Any person who shall violate any of the provisions of this Ordinance shall be guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not to exceed twenty-five dollars, or by imprisonment in the County Jail for not more than ten days, or by both such fine and imprisonment.

Section 3. This Ordinance shall take effect immediately.

**Ordinance 879. Relating to the Duties of the Board of Fire Commissioners.**

Section 1. The Board of Fire Commissioners shall adopt an official badge for the Fire Department, the design and material of which shall be selected by them, and a copy of the same filed in the office of the Board of Supervisors.

Said Board of Fire Commissioners shall provide each member of the Fire Department with one of said badges, to be worn by him while on duty, on the outside of his outer garment, and on the left breast thereof.

No person shall falsely represent himself to be a member of the Fire Department of this City and

County, nor wear or use, or have in his possession, or under his control, any official badge of said Fire Department, unless he is a regular member thereof.

Section 2. The Board of Fire Commissioners may, at the end of each fiscal year, issue passes to persons other than members of the Fire Department, for the purpose of securing their admittance within the lines designated by ropes or guards at fires.

Not more than four hundred such passes shall be issued during any one fiscal year, and they shall expire at the end of each fiscal year. A record of the issuance of such passes shall be kept in the office of the Board of Fire Commissioners, with the date of issuance, the name of the person to whom issued, and the number of the pass. The Board of Fire Commissioners may, however, at any time, revoke and annul any and all such passes at its pleasure. Said passes shall not be transferable and no persons shall wear or use, or have in his possession, or under his control, any such passes, unless the same was issued to him by the Board of Fire Commissioners.

Section 3. This Ordinance shall take effect and be in force immediately.

### **Ordinance No. 927.—Prohibiting Interference or Injury to the Fire and Police Telegraph Systems.**

Section 1. It shall be unlawful for any person, firm or corporation to place, or cause to be placed, any article or thing on or upon any sidewalk in such a manner as to interfere with or obstruct the free access or approach to any signal box of the Fire and Police Telegraph Systems; or without authority from the Chief of the Department of Electricity to run any wire on any of the telegraph poles or fixtures of said systems; or to run, erect or maintain any wire across or parallel with any wire of said systems within a distance of four (4) feet thereof; or, without authority from the Chief of the Department of Electricity, to break, remove or injure, or cause to be broken, removed or injured, any of the parts or appurtenances of said systems; or,

without authority, to make, or fit, or cause to be made or fitted, any key to the lock of any signal box of said systems; or, without authority, to have or retain in his possession any key belonging to or fitted to the lock of any such signal box; or to pick or force the lock of any such signal box.

Section 2. It is hereby unlawful for any person wilfully to make or cause to be made any false alarm of fire or any false call for police assistance, or for the police patrol wagon, or for any hospital ambulance of the Department of Board of Health, by means of City or any telegraph or telephone system, or any other way.—As amended by Ordinance No. 1061 (New Series), approved February 8, 1910.

Section 3. It shall be unlawful for any person, with intent to deceive, to falsely represent himself to be an employe of the fire and police telegraph systems.

Section 4. Any person, firm or corporation who shall violate any of the provisions of this Ordinance shall be guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine not to exceed five hundred (500) dollars, or by imprisonment in the County Jail for not more than six (6) months, or by both such fine and imprisonment.

Section 5. This Ordinance shall take effect and be in force immediately.

#### **Ordinance No. 1025.—Regulations to be Observed at Fires.**

Section 1. It shall be the duty of police officers, at the time of any fire, to place ropes and guard lines across all public streets on which any burning buildings or premises are situated, and at such other points as they may deem necessary.

Section 2. It shall be unlawful for any person except owners and occupants, and their employes, of buildings endangered by fire, and officers and members of the Fire Department and Police Department, and persons having permits from the Fire Commissioners or Police Commissioners, to pass within such lines



or to remain within such lines when ordered outside thereof by any police officer.

Section 3. Any person who shall violate any of the provisions of this Ordinance shall be guilty of a misdemeanor and, upon conviction thereof, shall be punished by a fine not exceeding five hundred (500) dollars, or by imprisonment in the County Jail for not more than six (6) months, or by both such fine and imprisonment.

Section 4. This Ordinance shall take effect and be in force immediately.

**Ordinance No. 1032. Regulating the Removal of Debris Resulting from Fire.**

Section 1. The owner or person having in his possession or under his control upon any premises any hay, straw or forage of any kind, bales of wool, cotton, paper or other substances which have been rendered useless or unmerchantable by reason of any fire on said premises, or any other debris resulting from such fire, must remove the same from such premises within twenty-four hours after notice so to do from the Chief Engineer of the Fire Department.

Section 2. Any person who shall violate any of the provisions of this Ordinance shall be guilty of a misdemeanor and, upon conviction thereof, shall be punished by a fine not exceeding five hundred (500) dollars, or by imprisonment in the County Jail for not more than six (6) months, or by both such fine and imprisonment.

Section 3. This Ordinance shall take effect and be in force immediately.

**Ordinance No. 1371. Prohibiting Persons from Driving Over Hose Belonging to the Fire Department.**

Section 1. No person or persons shall drive over, with any vehicle, any line of hose in use by or belonging to the Fire Department.

Section 2. Any person or persons who shall violate any of the provisions of this Ordinance shall be guilty

of a misdemeanor, and, upon conviction thereof, shall be punished by a fine not to exceed five hundred (500) dollars, or by imprisonment in the County Jail for not more than six months, or by both such fine and imprisonment.

Section 3. This Ordinance shall take effect and be in force immediately.

**Ordinance No. 1563. Requiring the Attendance of a Competent Person to be Present at the Fire While Oil is Being Burned for Fuel Purposes, Providing for Revoking the Permit to Store and Use Oil for Fuel Issued by the Board of Supervisors, and Prescribing the Duty of the Fire Marshal.**

Section 1. All oil burning plants within the City and County of San Francisco shall, after the passage of this Ordinance, be in charge of a competent person; said person after having lighted the oil burning fire and during all of the time said fire is burning, shall not be absent from the oil burning fire for more than twenty (20) minutes at any one time without returning to the oil fire and seeing that the oil burning fire is properly burning in a safe and satisfactory manner. If it should be necessary for said person to be absent from the oil fire for a longer period than twenty (20) minutes, then the said person shall, before leaving the oil fire, extinguish the fire and see that the oil fire is not burning, and shall stop and shut off all electric currents, motors, pumps, compressors or any other machinery or device used in the burning of oil for fuel, so that no oil can flow to the fire during the absence of said person from the oil fire. Provided, however, that this shall not apply wherever any automatic device that has been approved by the Fire Marshal is used, which will, when the oil fire goes out or becomes extinguished from any cause, immediately and automatically shut off all electric currents, motors, pumps, compressors or any other machinery or device used in the burning of oil for fuel.

Section 2. Duty of the Fire Marshal. It shall be the duty of the Fire Marshal, if any person or persons,

firm, company, corporation or association using oil for fuel purposes, shall fail or refuse to comply with any of the provisions of this Ordinance (which are for the public safety), to report the same in writing to the Board of Supervisors; said Board of Supervisors shall, through the Clerk of said Board of Supervisors, notify said person or persons, firm, company, corporation or association to appear before the Board of Supervisors and show cause why the permit which has previously been granted by said Board of Supervisors to store and use oil for fuel shall not be revoked.

Section 3. Penalty. Any person or persons, firm, company, corporation or association that violates, disobeys or refuses to comply with any of the provisions of this Ordinance shall be deemed guilty of a misdemeanor, and, upon conviction, shall be punished by a fine of not less than ten dollars nor more than one hundred dollars, or by imprisonment in the County Jail for not more than three months, or by both such fine and imprisonment; and each such person or persons, firm, company, corporation or association shall be deemed guilty of a separate offense for every day such violation, disobedience or refusal shall continue, and shall be subject to the penalty imposed by this Ordinance for each and every such separate offense.

Section 4. This Ordinance shall take effect immediately.

**Ordinance 1874 (New Series). Requiring the cleaning of Vacant Lots by the Removal of Rubbish and Debris.**

Section 1. Owners of all vacant lots in the City and County of San Francisco are hereby required to remove all rubbish and debris thereon within thirty (30) days after the receipt of notice to remove the same. Notice to remove such rubbish and debris shall be given by the Police Department and served by delivering a copy thereof to the owner or his agent personally, or if such owner or agent be not known, then by posting the same in a conspicuous place on the lot to be described in this notice.

Section 2. The presence of such rubbish or debris is hereby declared to be a nuisance.

Section 3. The Police Department is hereby charged with the proper enforcement of this Ordinance.

Section 4. Any person neglecting or refusing to remove any rubbish or debris within thirty (30) days after receipt of notice so to do, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be subject to a fine of not more than one hundred (100) dollars, or by imprisonment in the County Jail for a period of not more than one (1) month or by both such fine and imprisonment.

Section 5. This Ordinance shall take effect immediately.

**Ordinance No. 2028. Providing for Fire Drills for Persons Employed or Otherwise in Attendance in Factories, Workshops, Public or Private Schools, Asylums or Department Stores.**

Section 1. In all factories, workshops, public or private schools, asylums or department stores, where persons are employed or otherwise in attendance above the first floor, fire drills shall be held therein, upon notice being served upon the proprietor or the person in charge of such place as specified herein, by the Chief of the Fire Department, with the approval of the Board of Fire Commissioners, at such times as may be mutually agreed upon by the Chief of the Fire Department and the proprietor or person in charge of such establishment, said drills to be held under the supervision of an officer of the San Francisco Fire Department, detailed by the Chief Engineer of said Fire Department.

All employes or occupants of premises wherein a fire drill is being held must leave the building during the holding of such fire drill.

Those who are actually engaged in the performance of this drill and those who are required to protect property are exempted from this provision.

Section 2. The Chief Engineer of the San Francisco Fire Department shall issue instructions in writing to owners, proprietors or persons in charge of factories, workshops, public or private schools, asylums and department stores, that fire drills are to be introduced in order to help the employes or occupants to leave the building rapidly and without confusion, and shall furnish rules and explicit directions which shall be observed by employes or occupants of such buildings affected, and said owners, proprietors or persons in charge shall have the said instructions printed in whatever language is understood by any and all employes and occupants of such building and the same shall be posted in conspicuous place in said establishments.

Section 3. All doors leading from factories, workshops, public or private schools, asylums or department stores, now existing or which may hereafter exist and be operated, shall open outward and remain unlocked during working hours or during occupancy by persons in said premises, and the owners, proprietors or those in charge of said premises shall install either gongs, bells or whistles within the hearing of all employes or occupants, so that in case of fire, panic or fire drill all said employes or occupants may immediately leave the building in accordance with instructions issued by the Chief Engineer of the Fire Department.

Section 4. After each fire drill as set forth in section 1 of this Ordinance, the officer of the Fire Department in charge shall make out a full report concerning said fire drill and file the same with the Board of Fire Commissioners and the Chief Engineer of said Fire Department, which report shall be of public record.

Section 5. Any person, firm or corporation violating or omitting to comply with the above provisions of this Ordinance shall be guilty of a misdemeanor, and upon conviction thereof shall be punishable by a fine of not less than \$25.00 or more than \$500.00, or by im-



prisonment in the County Jail for not more than six months, or by both such fine and imprisonment.

Bill No. 9341. Ordinance No. 8851. (New Series).  
Providing for the Establishment of a Bureau of Fire Prevention, Prescribing Its Duties and Penalties for Violations Thereof; Repealing Ordinance No. 5185 (New Series).

Be it ordained by the People of the City and County of San Francisco, as follows:

Section 1. There is hereby established within the Fire Department of the City and County of San Francisco a Bureau of Fire Prevention and Public Safety, which shall be under the jurisdiction of the Board of Fire Commissioners.

The Board of Fire Commissioners shall detail from the uniformed force of the Fire Department to the Bureau of Fire Prevention an officer to be in charge of the Bureau, who shall be held responsible for all work in connection therewith.

The Board of Fire Commissioners shall detail from the uniformed force of the Fire Department, in addition to the officer in charge, such other officers and members as may be necessary to act as inspectors for the Bureau and to perform such other duties as the officer in charge of the Bureau may direct. But in no case shall the personnel of said Bureau exceed 2 per cent of the membership of the San Francisco Fire Department.

There is also hereby established in connection with the said Bureau, an Advisory Board, which shall also serve as a Board of Appeals, as hereafter provided. This Board shall consist of the Fire Marshal, the Superintendent of the Bureau of Building Inspection of the Board of Public Works, the Chief of the Department of Electricity, the Health Officer, the Chief of Police, Secretary of the City Planning Commission, the Chairman of the Fire Committee of the Board of Supervisors, the Coroner and the Chief Engineer of the Fire Department, who shall be the Chairman of the said Board. The duties performed by and as members of the Advisory Board shall be in addition to their

other official duties and shall be without additional compensation. Regular meetings of the Board shall be held not less than once each month, and special meetings at the discretion of the Chairman or at such times as a written request may be made therefor by three members of the Board. Five members of the Board shall constitute a quorum and decisions shall be by majority vote of those present, except when sitting as a Board of Appeals five votes shall be necessary to overrule an order of the Bureau.

It shall be the duty of the Advisory Board to promote an active cooperation and coordination between the Bureau and the officials constituting the Advisory Board, and to adjust or decide matters pertaining to inter-departmental relations, and it shall be the mutual duty of the Bureau and Advisory Board, or the members thereof, to provide for the exchange of information pertaining to the work and responsibilities of the several departments represented, to permit access to non-confidential records, papers and data, and to render such other warranted assistance as may be requested.

Section 2. The officer in charge of the Bureau, with the approval of the Board of Fire Commissioners, shall from time to time make such rules and regulations governing the personnel of said Bureau as he may deem necessary.

Section 3. The officer in charge of the Bureau shall, not less than once each month, make a written report to the Board of Fire Commissioners, which shall include a statement of all work performed by the Bureau during the period covered. The said officer shall also file a copy of said report with each member of the Advisory Board.

Section 4. The members of the Bureau are hereby empowered to enter upon and make inspections of all buildings, structures or premises within the City and County of San Francisco for the purpose of determining if all laws of the State of California and all laws and ordinances of the City and County of San Francisco have been complied with relative to proper, safe and adequate means of egress therefrom, and all laws

and ordinances regarding fire prevention, fire protection and fire spread control are being complied with and the proper precautions are being maintained at all times for the protection of lives and property from fire, and they shall take such action as may be necessary to enforce all laws and ordinances relating to this subject.

Provided, that the above referred to right of entry shall be exercised only at reasonable hours, and in no case shall entry be made to any dwelling in the absence of the owner or tenant thereof, without the written order of a competent court.

The Bureau shall make like inspections of all buildings, structures and premises for the purpose of noting if all laws and ordinances have been complied with relative to the proper installation of appliances and apparatus for the extinguishment of fires, sounding of alarms and whatever safeguards that might be necessary for the protection of lives and property from fire, and they are likewise charged with the enforcement of the same.

Any condition found to exist in or about any building, structure or premises that endangers life or property from fire, explosion, panic or other calamity, and where there may be no law or ordinance governing the same, is hereby declared to be, and is, a public nuisance, and the Bureau is hereby authorized and directed to cause the abatement of said nuisance.

Within 90 days from the discovery of any of the foregoing conditions, it shall be the duty of the Bureau of Fire Prevention to prepare and submit to the Board of Supervisors an ordinance providing for the correction thereof.

The Bureau is hereby authorized to take such photographs as may be necessary for the records of the Bureau.

It shall be the mutual duty of the Bureau and the members of the Advisory Board, when violations of law or ordinance are found which are under the jurisdiction of some other municipal department or official, promptly to report said violation to the said department or official.

Section 5. Whenever application shall be made for a permit for the erection, alteration or repair of any building, structure or premises subject to laws or ordinances governing fire-spread control, means of egress, installation of fire-fighting and fire-extinguishing appliances, fire alarms, and automatic sprinkler systems, the plans and specifications for such work shall be examined with respect to said laws or ordinances and passed upon by the Bureau. Such examination shall be made in the office of the Bureau of Building Inspection of the Board of Public Works by an authorized representative of the Fire Department, who shall also be a fire warden specifically assigned to this work. Should the plans and specifications fail to comply with the fire laws above mentioned, the changes or additions required for acceptance by the Bureau of Fire Prevention shall be covered in a report to the Superintendent of the Bureau of Building Inspection. If or when the plans, and specifications as presented or modified are in accordance with the above referred to fire laws, the approval of the Bureau of Fire Prevention shall be endorsed on the corresponding application for permit.

Prior to or upon the completion of the erection, alteration, repair of any building, structure, or premises as described in the preceding paragraph, the Superintendent of the Bureau of Building Inspection shall so notify the Bureau of Fire Prevention, which shall thereupon make an inspection thereof, and if such construction, as respects the fire provisions referred to in the preceding paragraph, is found to be in accordance with the plans and specifications and modifications thereof as approved by the Bureau of Fire Prevention, the said Bureau shall so certify in writing to the Superintendent of the Bureau of Building Inspection. Should the Bureau refuse to give such approval, it shall make a written report on the reasons therefor to the Superintendent of the Bureau of Building Inspection, whose duty it shall be to see that the said construction is in all respects in full accord with the approved plans and specifications and modifications thereof before a certificate is issued.

Section. 6. Whenever it may be necessary to obtain a

permit or license to conduct any place of assemblage, hospitalization of any character, refuge or detention, or to conduct a hotel, lodging house, rooming house, tenement house, apartment house, restaurant, office, workshop, automobile repair shop, factory, mill manufactory, department store or any establishment where any substance of a highly combustible or inflammable nature is stored or is to be stored, kept or held for sale, a written notice of the application for said permit shall be sent to the Bureau of Fire Prevention by the department or official authorized to issue such permit or license so that an inspection of the premises for which the permit is applied can be made by said Bureau, and if, as a result of such inspection, any hazardous condition is found, or the business conducted or to be conducted in said premises or the occupancy thereof is such as would endanger life or property, the permit or license shall not be issued until such time as proper safeguards and appliances have been installed in said premises according to law or said hazardous condition removed or abated. Whenever the issuance of any permit or license shall be refused as a result of the report of the Bureau of Fire Prevention as provided in this section the person, partnership, firm or corporation aggrieved shall have the right to appeal to the Board of Appeals from said report or ruling in the manner provided in Section 7 hereof and pending a determination of said appeal by the said Board of Appeals said person, partnership, firm or corporation may continue to operate or conduct said premises, and if said appeal be determined in favor of the party appealing, said permit shall be issued forthwith, but if said appeal be overruled no license or permit for said premises shall be issued until the order of the Bureau of Fire Prevention is complied with and that said person, partnership, firm or corporation shall be allowed at least five days and such additional time as in the discretion of the Fire Prevention Bureau shall be necessary to comply with the ruling or order of said Bureau.

Section 7. Whenever any person, partnership, firm or corporation shall receive any order from the Bureau which in his or their opinion is unreasonable or un-



just, he or they may, within ten days after receipt or issuance of said order or the occurrence of such act, apply in writing for a review of the said order or act by the Advisory Board, sitting as a Board of Appeals, and such action shall place the said order or act in abeyance pending the decision of the said Board, provided that said decision shall not be deferred for more than thirty (30) days following the presentation of the appeal. Should the appellant be a member of the Board his rights and privileges thereon shall be unaffected by such fact. The said appeal shall be submitted to the Chief Engineer of the Fire Department, as the chairman of the said Board, who shall submit the same to the Board at its next meeting.

Section 8. It shall be the duty of the City or District Attorney, whenever notified by the Bureau of Fire Prevention, to prosecute all cases of neglect or refusal to obey any of the written order or orders of the Bureau, issued pursuant to the provisions of the ordinance, and it shall be the duty of the City or District Attorney to aid, assist or defend the Bureau of Fire Prevention in the preparation, adoption and enforcement of all laws and ordinances and written orders of the Bureau relating to the prevention and protection from fire or in the correction of any other hazardous condition that would endanger life or property.

Section 9. Nothing in this ordinance contained shall be in conflict with or in any way lessen or abrogate the power and authority granted by law to the Fire Marshal or any other official, department or board of the City and County of San Francisco.

Section 10. The service of any order or notice required by this ordinance may be made by depositing a copy thereof in the United States mail, addressed to the owner, or any one of the several owners, of the premises in question, or his or their duly authorized agent, or by delivering a copy thereof to said owner, or any one of the several owners, or his or their duly authorized agent, or by the mailing or delivery of a copy thereof to the lessee, or any one of several lessees, of said premises, or a particular part thereof, or

by delivering a copy thereof to any person of suitable age and discretion in charge, or apparently in charge, of the premises, which order or notice shall designate, by number and date of passage, the ordinance or ordinances the violation of which said order or notice seeks to restrain.

Section 11. Any person or persons, firm, company, corporation, or association that violates, disobeys, omits, neglects or refuses to comply with any of the provisions of this ordinance is guilty of a misdemeanor and, upon conviction thereof, shall be punished by a fine of not more than two hundred and fifty (\$250) dollars, or by imprisonment in the County Jail for not more than six (6) months, or by both such fine and imprisonment, and every such person or persons, firm, company, corporation or association shall be deemed guilty of a separate offense for every day such violation, disobedience, omission, neglect or refusal shall continue and shall be subject to the penalty imposed by this section for each and every separate offense.

Section 12. Should any section or provision of this ordinance be held unconstitutional or invalid by any court, all other sections and provisions shall nevertheless be deemed as effective as though such unconstitutional or invalid section or provision had never been inserted in this ordinance.

Section 13. Ordinance No. 5185 (New Series) is hereby expressly repealed.

Section 14. This ordinance shall take effect immediately.

**Finally Passed**—Board of Supervisors, San Francisco, September 22, 1930.

Ayes: Supervisors Andriano, Canepa, Gallagher, Havenner, Hayden, McGovern, Miles, Peyser, Rossi, Suhr, Spaulding, Toner.

Absent: Supervisors Colman, McSheehy, Power, Ronconvieri, Shannon, Stanton.

J. S. DUNNIGAN, Clerk.

Approved: San Francisco, Sept. 23, 1930.

ANGELO J. ROSSI, Acting Mayor.

**Ordinance No. 5633. Regulating the Sale of Gasoline and Providing for the Exhibition of Disks Indicating the Name or Trade Mark of the Manufacturer of Such Gasoline.**

Section 1. It shall be unlawful for any person, firm or corporation to sell gasoline manufactured by any other person, firm or corporation from any tank, barrel, drum or other movable or stationary container unless there is securely fastened to each pump attached to such container, in such manner as to be plainly visible to any person purchasing such gasoline, a metal disk not less than twelve (12) inches in diameter bearing in letters than less than one inch in height the name and-or the trade mark of the manufacturer of such gasoline.

Section 2. Any person, firm or corporation violating any provision of this Ordinance shall be deemed guilty of a misdemeanor and upon conviction thereof shall be punished by a fine not exceeding three hundred (300) dollars or by imprisonment in the County Jail for not more than one month, or by both such fine and imprisonment.

Section 3." This Ordinance shall take effect thirty days after its passage.

**Ordinance No. 6224. Prohibiting the Ignition or Burning of the Husks, Hulls, Chaff, Winnowings, Straw or Other Waste Vegetable Matter of Rice, Wheat, Barley, Oats or Any Other Grain or Seed, or Any Other Inflammable Substance or Refuse in the Open Air within certain districts in the City and County of San Francisco.**

Section 1. It shall be unlawful for any person, firm, corporation or association of persons to ignite or burn, or cause or permit to be ignited or burned, any rice hulls, or any husks, hulls, chaff, winnowings, straw or other waste, vegetable matter of rice, wheat, barley, oats or of any other grain or seed, or any other inflammable substance or refuse of any character in the open air within the following described districts in the City and County of San Francisco.

(a). Commencing at the intersection of Potrero Avenue and Twenty-fifth Street, thence easterly along the center line of Twenty-fifth Street to the shore line of the Bay of San Francisco, thence southerly along said shore line to the center line of Army Street, thence westerly along the center line of Army Street to the center line of Potrero Avenue, thence northerly along the center line of Potrero Avenue to the point of commencement.

(b) Commencing at the intersection of San Bruno and Oakdale Avenues, thence easterly along the center line of Oakdale Avenue to the center line of Barneveld Avenue, thence northerly along the center line of Barnveld Avenue to the center line of Barton Avenue, thence easterly along the center line of Barton Avenue to the center line of Selby Street, thence southerly along the center line of Selby Street to the center line of McKinnon Avenue, thence easterly along the center line of McKinnon Avenue to the center line of Quint Street, thence southerly along the center line of Quint Street to the center line of Oakdale Avenue, thence easterly along the center line of Oakdale Avenue to the center line of Third Street, thence southerly along the center line of Third Street to the intersection of San Bruno Avenue and Third Street, thence northerly along the center line of San Bruno Avenue to the point of commencement.—As amended by Ordinance No. 6316 (New Series).

Section 2. Any person, firm, corporation or association of persons, violating any provision of this Ordinance, shall be deemed guilty of misdemeanor, and, upon conviction, shall be punished by a fine not exceeding three hundred (300) dollars, or by imprisonment for a term not exceeding one hundred (100) days, or by both such fine and imprisonment.

Section 3. This Ordinance shall take effect immediately.

**Ordinance 6373. Regulating the discharge of smoke, Soot, Ashes, Cinders, and Fumes Within the City and County of San Francisco and Providing Penalties for the Violation of Its Provision.**

Section 1. It shall be unlawful for any person, firm, association or corporation to operate or maintain within any Residential or Commercial district of the City and County of San Francisco, as defined in and by its zoning ordinances from time to time in force, any permanently located furnace, fire-box or other device whereby petroleum, coal or other substance is consumed by fire which emits or causes to be emitted dense smoke as hereinafter defined; provided, however, that dense smoke may be emitted for a period of one minute to afford the operator to locate the cause of such smoke; and provided, further, that dense smoke may be emitted during a period or periods aggregating not more than ten minutes in any one hour during which the fire-boxes, flues or furnaces are being cleaned, a new fire is being started or fires are being increased or decreased in intensity; provided, further, that portable boilers shall have screen bonnet on smokestack which shall prevent the escape of unreasonable quantities of oil or soot. Smoke shall be considered dense within the meaning of this Ordinance when its density shall exceed the density designated as diagram No. 3 upon the Ringelmann Smoke Chart published and used by the United States Bureau of Mines, a copy of which is on file in the office of the Clerk of the Board of Supervisors of the City and County of San Francisco.

Section 2. It shall be unlawful for any person, firm, association or corporation within any Residential or Commercial district aforesaid to cause, permit or allow solid particles of soot, ashes or cinders to issue or be discharged from any flue, chimney or smokestack or from any other structure or appliance for such period of time or in such quantities as to become a nuisance by reason of depositing such particles upon surrounding property.

Section 3. It shall be unlawful for any person, firm,



association or corporation within the City and County of San Francisco to cause, permit or allow objectionable fumes to issue or be discharged from any flue, chimney or smokestack or from any other structure or appliance for such period of time or in such quantities as to become a nuisance on account of causing obnoxious odors in any Residential or Commercial district aforesaid.

Section 4. It shall be unlawful for any person, firm, association or corporation within any Commercial district aforesaid, to erect, construct or maintain, or to cause or permit to be erected, constructed or maintained, any permanently located stationary flue, chimney or smokestack within fifty (50) feet of any window of any adjacent building unless the top of such flue, chimney or smokestack shall be higher than each portion of such window; provided, however, that this section shall not apply in any case where the persons owning and operating such adjacent building shall refuse to grant permission to brace or support such flue, chimney or smokestack by means of wire or struts attached to such building.

Section 5. Representatives of the Board of Health of the City and County of San Francisco are hereby authorized to enter during reasonable hours upon any premises upon which is located any flue, chimney or smokestack or any other structure or appliance from which smoke, soot, ashes, cinders or fumes are discharged in violation of this Ordinance, for the purpose of making an examination as to the cause of the excessive discharge of such smoke, soot, ashes, cinders or fumes and the manner of using the same and any other fact or facts showing compliance with or violation of this Ordinance. Such representatives shall make a detailed report to the Board of Health of such examination within ten (10) days after receiving a complaint of violation of this Ordinance.

Section 6. Any person, firm, association or corporation who shall violate any of the provisions of this Ordinance shall be punishable by a fine not exceeding fifty dollars (\$50), or by imprisonment in the

County Jail for not exceeding five (5) days, or by both such fine and imprisonment.

Section 7. This Ordinance shall take effect and be in force ninety (90) days from and after its passage.

**ORDINANCE No. 6798—Requiring the Fire Commissioners to Detail One or More Firemen to be Present in Any and all Buildings Used as a Theater, Hall, Concert Hall, or Place of Public Assemblage, During any Performance Therein; Regulating the Duties of Such Firemen and Providing a Penalty for the Violation of This Ordinance.**

Section 1. The Board of Fire Commissioners shall detail one or more experienced members of the Fire Department as they may deem necessary or proper in the interest of the public safety, in any and all buildings or structures used as a theater, public hall, concert hall or other place of public assemblage to be present in such building or structure during the progress of any performance, exhibition, lecture, entertainment or public assemblage therein.

Section 2. The members of the Fire Department so detailed shall report immediately any violation of this Ordinance or any violation of any other law or ordinance pertaining to the extinction of fires or public safety to the Police Department, which shall forthwith cause said laws or ordinances to be enforced.

Section 3. All ordinances or parts of ordinances in conflict with this ordinance or any part thereof, are hereby repealed.

Section 4. Any person or persons, firm or corporation who shall violate any of the provisions of this ordinance, or who shall interfere with any member of the Fire Department in the discharge of his duties as herein prescribed, shall be guilty of a misdemeanor and shall be punished by a fine not to exceed the sum of Five Hundred Dollars (\$500.00) or by imprisonment in the County Jail not exceeding six months, or by both such fine and imprisonment.

Section 5. This ordinance shall take effect and be in force immediately.

**ORDINANCE 6300—(New Series).** Providing for the Removal of all Wooden and Frame Buildings Erected within the City and County of San Francisco subsequent to the Earthquake and Fire of April 18, 1906, in Violation of the Building Laws and Ordinances of the City and County of San Francisco, and Providing Penalties for the Violation Thereof.

Section 1. It is hereby found and recited that subsequent to the earthquake and fire of April 18, 1906, by reason of which a large part of the City and County of San Francisco was reduced to ruins, many wooden and frame buildings were constructed, to meet the emergency then existing, in violation of the building laws and ordinances of said City and County of San Francisco. It is further found and recited that said emergency has long since ceased to exist and that there is no longer any reason for the continued maintenance of any of said wooden and frame buildings and that the public safety and welfare now demand their removal.

Section 2. All wooden and frame buildings erected subsequent to April 18, 1906, within the City and County of San Francisco in violation of and contrary to the laws and ordinances of said City and County of San Francisco are hereby ordered demolished and removed.

Section 3. It is hereby made the duty of the Board of Public Works to enforce the provisions of this ordinance and the Board of Public Works is hereby directed and empowered to serve notice in writing upon all owners of buildings affected by this ordinance to demolish and remove said buildings in accordance with the provisions hereof.

Said notice may be served upon the person or persons, or either of them, owning any such building by personally delivering a copy of said notice to the person to be served; and if such owner or owners be absent from the City and County of San Francisco or cannot be found therein then such notice may be served in the same manner upon any tenant or other person in possession or occupancy of any such building

or any part thereof; provided, however, that if the owner or owners of any such building be absent from said City and County or cannot be found therein and there is no tenant or other person in possession or occupancy of such building or any part thereof, then such notice may be served by posting same in some conspicuous place upon such building.

Section 4. If the owner or owners of any such building shall fail for a period of ninety days after service of notice as provided in section 3 hereof to demolish and remove said building said Board of Public Works is hereby authorized and directed to demolish and remove such building; and the cost of said demolition and removal shall constitute a first lien on said building and the material thereof.

Section 5. Any person, corporation, partnership or association of persons failing to comply with the provisions of this ordinance shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine not exceeding \$500, or by imprisonment in the County Jail not exceeding six months, or by both such fine and imprisonment; and every such person, corporation, partnership or association of persons shall be deemed guilty of a separate offense for every day that any building owned by such person, corporation, partnership or association of persons remains undemolished after the expiration of ninety days after service of notice as provided in section 3 hereof, and shall be subject to the penalty imposed by this section for each separate offense.

Section 6. This ordinance shall take effect and be in force immediately.

**Ordinance 6290 (N. S.) Providing for the Construction, Maintenance and Operation of Refrigerating Plants Within the City and County of San Francisco, and Prescribing Safety and Signalling Appliances and Devices to be used in Connection Therewith, and Prescribing a Penalty for the Violation of this Ordinance.**

Be it ordained by the People of the City and County of San Francisco, as follows:

Section 1. Except as hereinafter provided in this

ordinance, it shall be unlawful for any person, firm, corporation or association to operate or maintain in the City and County of San Francisco any plant producing refrigeration by means of gases under pressure in connection with cold storage plants, breweries, ice manufacturing, hotels, restaurants, clubs or other places of business, without a permit issued by the Chief of the Fire Department, and such permit shall not be issued to any person, firm, corporation or association until all of the provisions of this ordinance shall have been complied with.

Section 2. All refrigerating plants hereafter erected shall conform to the terms of this ordinance by providing curb shut-off valves, automatic shut-off valves or emergency pipes for discharge in case of accident, exits, safety devices on refrigerating machines, maintenance of lights in rooms containing condensers or compressors of ammonia or ethyl chloride, fire walls, the maintenance of life saving apparatus, the designation of the chemical contained in pipes by means of signs and the pressure allowed in refrigerating machines. All refrigerating plants that are already erected shall conform to such terms of this ordinance as may be required by the Chief of the Fire Department and Board of Public Works.

Section 3. All refrigerating machines shall be equipped with automatic safety devices which discharge at 300 lbs. to the square inch for ammonia, 1400 lbs. per square inch for carbon dioxide, 100 lbs. per square inch for sulphur dioxide, and 100 lbs. to the square inch for ethyl chloride into the emergency pipes required by the preceding section or into the low pressure side.

Section 4. In all refrigerating plants, every room containing a refrigerating chemical under pressure exceeding 40 lbs. per square inch for ethyl chloride, 60 lbs. for sulphur dioxide, 100 lbs. for ammonia and 500 lbs. for carbon dioxide, and which by accident may become filled with gases generated by said chemical shall have an exit to the open air direct, or by means of a stairway or to a room or hall from which said gases can be excluded. Other refrigerating plants shall be



provided with such means of exit as may be prescribed by the Board of Public Works and Chief of the Fire Department. Rooms which contain only the liquid supply pipe to refrigerating coils are not included within the meaning of this section.

Section 5. The maximum pressure allowed in a refrigerating machine shall not exceed 300 lbs. ammonia, 1400 lbs. for carbon dioxide, 100 lbs. for sulphur dioxide and 100 lbs. for ethyl chloride to the square inch. All pipes for refrigerating purposes shall stand a hydrostatic pressure at double the maximum pressure per square inch specified in this section. All fittings must stand a pressure of at least three times the maximum pressure.

Section 6. No room containing refrigerating condensers or compressors of ammonia or ethyl chloride under pressure shall have in it any open flame, arc light or direct opening to the boiler room, but an internal combustion engine may be located therein, which may be started in the usual manner. There shall be a division wall between such room and the boiler room, and the boiler room equipped with a self-closing door of the Underwriter type.

Section 7. In all refrigerating plants and in all buildings to which refrigerating chemicals may be piped from outside sources, there shall be kept fit and available for use, suitable helmets or respirators, which shall permit the wearer to reach without suffocation any part of the refrigerating system. Such helmets or respirators shall be of a type approved by the Chief of the Fire Department. In all refrigerating plants of a capacity of seventy-five tons or less, and in all buildings to which refrigerating chemicals may be piped from outside sources, there shall be at least one helmet or respirator and in plants of over seventy-five tons capacity there shall be at least two helmets. Such helmets or respirators shall be kept in a suitable case or cabinet, which shall be easy of access, and the location of which shall be known to all employes having access to such refrigerating plants or systems, such location being outside of refrigerating machinery room if in a refrigerating plant, and near the doorway leading to

such room. Helmets or respirators shall be officially inspected every six months by the Fire Chief and an inspection card shall bear such date of inspection.

Section 8. In all refrigerating plants in all buildings to which refrigerating chemicals may be piped from outside sources, the pipes shall have conspicuously displayed on them at proper places signs with easily legible letters naming the refrigerating chemical contained therein.

Section 9. In all refrigerating plants there shall be posted several copies of a brief set of rules satisfactory to the Chief of the Fire Department, directing all employes as to their duties in case of fire or other emergencies. Employers shall be responsible for and shall conduct at suitable times, as directed by the Chief of the Fire Department, proper drills for all employes in case of fire or other emergencies.

Section 10. Refrigerating plants may store a surplus stock of two cylinders of refrigerating chemicals, or if deemed necessary, a quantity not to exceed ten per cent of the storage of the plant. No cylinders containing gas under pressure shall be stored in the boiler or furnace room, but shall be stored in a cool place which has good ventilation and is remote as possible from fire. Where cylinders of refrigerating chemicals are kept or stored for wholesale or retail purposes, they shall be kept or stored in such place and manner and in such quantities as the Chief Engineer of the Fire Department may direct.

Section 11. All refrigerating plants using ammonia or ethyl chloride as a refrigerating agent shall be equipped with a device or devices for discharging the refrigerating agent under pressure in case of emergency into sufficient water to absorb all discharge gas and carry it off to the sewer; such device or devices shall be operated by a valve which can be opened both from inside and outside of the refrigerating plant at convenient places that will be accessible to the Fire Department. Such devices herein referred to shall be constructed in accordance with these recommendations by the American Society Refrigerating Engineers and shall be under

the direct supervision of the Chief of the Fire Department:

Section 12. No valves shall be located in the emergency discharge lines except the control and check valves to the water and refrigerant mixer, but there shall be one control valve on each emergency line located near connection to main high and low pressure lines for repair purposes only. Such additional valves shall be kept open at all times, and if they remain closed at any time a violation of the intention of these regulations has been committed. Such valves as may be necessary to close in case of emergency shall be painted white.

Section 13. The emergency valves and standard Fire Department connection shall be located on the public thoroughfare side of the building, either outside of the building or in a vestibule having glass panel doors which will provide easy access from the street, or such place as may be designated by the Board of Public Works and Fire Wardens. Valves and connections shall be at a height not more than five feet above the street or vestibule floor level. In no case shall such valves and connections be located over the exhaust outlet for ventilating the room containing the refrigerating plant or system.

Section 14. In large refrigerating plants there may be installed, at the discretion of the engineer in charge of such plant, pressure gauges on the high and low pressure emergency lines for determining changes in pressure while emergency lines are operating.

Section 15. The emergency valves shall be protected by a suitable metal box, which shall be locked at all times by such type of lock as may be approved by the Chief of the Fire Department, the lock to be opened only by officers and members of the Fire Department or the engineer of said refrigerating plant. On the outside of the box shall be painted in legible letters the words "FOR FIRE DEPARTMENT USE ONLY." The high pressure emergency valves shall be labeled "HIGH PRESSURE AMMONIA," and the low pressure emergency valves shall be labeled "LOW PRESSURE

AMMONIA." Where ethyl chloride is used the words "ETHYL CHLORIDE" shall be substituted for the word "AMMONIA" on such labels. There shall be located in this box a valve connected to water supply pipe of sufficient size; said valve shall be labeled "WATER VALVE." "THIS VALVE TO BE OPENED FIRST."

Section 16. All refrigerating plants shall be equipped with an automatic safety valve or valves on each compressor, receiver or generator, which valve or valves shall be set to discharge at a pressure not greater than 300 lbs. per square inch for ammonia, 1400 lbs. per square inch for carbon dioxide, 100 lbs. per square inch for sulphur dioxide or ethyl chloride. Such automatic safety valve or valves shall be connected to the high pressure side and may discharge to the low pressure side in such manner as specified by the American Society of Refrigerating Engineers.

Section 17. On carbon dioxide plants, in addition to the safety valve at the compressor specified in the preceding section, there may be an automatic safety valve located on the high pressure and on the low pressure sides as a substitute for the emergency device referred to in Section 12 of this ordinance. The points of connection for such automatic safety valves shall be located as indicated for the emergency discharge lines. The outlet from such automatic safety valves may discharge into the engine room or the outer air.

Section 18. In addition to safety valves and other valves hereinbefore specified, there shall be an automatic safety valve located at the point of entrance of pipes supplying any building with any refrigerating chemical, which shall be in case of accident to or breakage of the refrigerating system in such building, automatically shut-off the supply of refrigerant to such building. Such automatic safety valve shall operate at pressures not more than ten per cent greater than the pressure hereinbefore specified as the maximum pressure allowed in such refrigerating systems.

Section 19. There shall be installed and maintained at a point not more than four feet from the curb line of

the sidewalk, a suitable valve of a design approved by the Chief of the Fire Department, by means of which valve the supply of refrigerant may be shut-off from the building to which it may be piped. Such valve shall be placed in a suitable iron box of not less than 10 inches by 12 inches in dimension, and the top of such box shall be flush with the sidewalk surface and shall bear the words "S. F. F. D." and "AMMONIA." Where a refrigerant other than ammonia is used, the name of such refrigerant shall be substituted on the top of such box in place of the word "Ammonia." This box shall be so installed as to obviate all danger to pedestrians. The top of such box shall be easily removable.

Section 20. For the purpose of this ordinance, the definition of "refrigerating rooms" is hereby declared to be rooms in which are located compressors, generators, condensers, receivers, absorbers or any other apparatus necessary to produce or contain the refrigerating agent. Rooms which contain only the refrigerating chemical supply pipes to and from the refrigerating coils are not considered refrigerating machinery rooms, but such room, if occupied by any person or persons, must comply with the requirements of this ordinance as to exits specified herein.

Section 21. All vertical or horizontal openings that permit the passage of gases to other parts of the building from any room containing refrigerating machinery or a refrigerating system, which may not be a part of the refrigerating plant, shall be sealed or provided with self-closing doors of a type approved by the Chief of the Fire Department and the Board of Public Works. All refrigerating rooms, or rooms in which refrigerating chemical is contained, shall be provided with adequate ventilation to the open air, either direct or by means of a suitable duct or ducts. Where a mechanical system of ventilation is employed, control of such system shall be located at a point easily accessible in case of fire, breakage of pipes or other emergency.

Section 22. No one shall be permitted to tamper with any valve, or any part of the system referred to in this ordinance, except the engineer operating said



plant or the officers and members of the Fire Department in discharge of their duties.

Section 23. Applications for permits shall state the make of refrigerating machinery used, the refrigerating capacity in tons as rated by the manufacturer, the kind of chemical used, the amount of surplus chemical stored, the number of shifts and the time the plant is operating during a period of twenty-four hours, and the average number of employees. The application shall be signed by the applicant or his authorized agent, and shall give the name and address of the applicant and the location of the plant, stating the number of stories and kind of construction of same.

Section 24. Any person, firm, association or corporation who shall willfully violate any of the provisions of this ordinance shall, upon conviction, be punishable by a fine of not more than Five Hundred (\$500.00) Dollars, or by imprisonment not exceeding six months, or by both such fine and imprisonment.

Section 25. This Ordinance shall take affect immediately.

### **BILLBOARD ORDINANCE**

**ORDINANCE No. 4059 (New Series)—Regulating and Relating to the Construction, Erection, Maintenance and Use of Billboards in the City and County of San Francisco, and Licensing and Regulating the Occupation of Maintaining Billboards and Outdoor Advertising, Providing Penalties for the Violation of Same, and Repealing All Ordinances or Parts Thereof in Contract Therewith.**

Section 1. The term "billboard" as used in this Ordinance is hereby defined to be any board, fence, sign or structure erected for advertising purposes or upon which any advertisement is shown, or whereon any poster, bill, printing, painting, device or other advertising matter of any kind whatsoever may be placed, stuck, tacked, posted, printed, painted, pasted, or fastened, but this definition shall not be held to include any board, sign or surface used to display official notices, issued by any court or public office, or posted by any public

officers in the performance of a public duty, or used to display announcement of meetings to be held upon premises whereon such billboards or bulletin boards are displayed, or used, to advertise any business conducted on the premises where such billboard or bulletin board is located, nor shall it be held to include a real estate sign, advertising for sale or rent the property upon which it stands.

Section 2. The term "outdoor advertising" as used in this Ordinance is hereby defined to be advertising on any board, fence or structure, or the placing thereon of any poster, bill, printing, painting, device or any advertising matter of any kind whatsoever and the pasting, posting, painting, printing, nailing or tacking or otherwise fastening of any hand-bill, card, banner, sign, poster, advertisement or notice of any kind upon any property or place.

Section 3. No person, firm or corporation shall engage in or carry on the business or occupation of bill-posting, advertising sign painting or outdoor advertising or maintaining billboards without paying the license fee provided for in this Ordinance.

Section 4. The license fee imposed by this Ordinance shall be payable every quarter year and the amount thereof shall be determined by the amount of business done, as measured by the gross earnings from the business or occupation described in Section Three of this Ordinance, of the person, firm or corporation paying the license fee and of whom the license fee is required. The term "quarter year" as used in this Ordinance shall be the three months following the first days of January, April, July and October.

Section 5. Within ten days after the first day of each quarter year every person, firm or corporation of whom the license fee provided in this Ordinance is required shall file a written application, giving name and address of fixed place of business of applicant, with the Tax Collector of the City and County of San Francisco for the issuance to the applicant of a "Bill Poster and Outdoor Advertising License," and shall accompany said

application with a written statement truthfully showing the amount of business done for the three months preceding the first day of the quarter year, as measured by the gross earnings for the three months preceding business or occupation described in Section Three of this Ordinance of the applicant.

Section 6. Within twenty (20) days after the first day of every quarter year every person, firm or corporation specified in Section Three of this Ordinance shall pay to the Tax Collector a license fee as follows:

### **Classification A.**

When the amount of the business done, as measured by the gross earnings for the three months preceding the first day of the quarter year from the business or occupation described in Section Three of this Ordinance, of the person, firm or corporation paying the license fee and of whom the license fee is required, shall be less than one thousand (1000) dollars, the amount of the license fee per quarter shall be seventy-five (75) dollars.

### **Classification B.**

When the amount of business done, as measured by the gross earnings for the three months preceding the first day of the quarter year from the business or occupation described in Section Three of this Ordinance, of the person, firm or corporation paying the license fee and of whom the license fee is required, shall be more than one thousand (1000) dollars, but less than two thousand (2000) dollars, the amount of the license fee per quarter shall be ninety (90) dollars.

### **Classification C.**

When the amount of business done, as measured by the gross earnings for the three months preceding the first day of the quarter year from the business or occupation described in Section Three of this Ordinance of the person, firm or corporation paying license fee and of whom the license fee is required, shall be more than two thousand (2000) dollars, but less than five thousand (5000) dollars, the amount of the license fee per quarter

shall be one hundred and twelve and 50-100 (112.50) dollars.

#### **Classification D.**

When the amount of business done, as measured by the gross earnings for the three months preceding the first day of the quarter year from the business or occupation described in Section Three of this Ordinance of the person, firm or corporation paying the license fee and of whom the license fee is required, shall be more than five thousand (5000) dollars, but less than ten thousand (10,000) dollars, the amount of the license fee per quarter shall be one hundred and fifty (150) dollars.

#### **Classification E.**

When the amount of business done, as measured by the gross earnings for the three months preceding the first day of the quarter year from the business or occupation described in Section Three of this Ordinance of the person, firm or corporation paying the license fee and of whom the license fee is required, shall be more than ten thousand (10,000) dollars, but less than twenty-five thousand (25,000) dollars, the amount of the license fee per quarter shall be two hundred and twenty-five (225) dollars.

#### **Classification F.**

When the amount of business done, as measured by the gross earnings for the three months preceding the first day of the quarter year from the business or occupation described in Section Three of this Ordinance of the person, firm or corporation paying the license fee and of whom the license fee is required, shall be more than twenty-five thousand (25,000) dollars, the amount of the license fee per quarter shall be three hundred and seventy-five (375) dollars.

If, however, prior to the first day of the quarter year for which the "Bill Poster and Outdoor Advertising License" is applied for, the applicant therefor has not engaged in the business or occupation described in Section Three of this Ordinance, the amount of the license fee shall be one hundred and fifty (150) dollars for the

first quarter or fraction thereof that such applicant shall engage in such business or occupation, payable upon his engaging in such business or occupation. Thereafter such person, firm or corporation shall pay a license fee in accordance with the classification set out; but in case there remain, at the time of the issuance of such license, less than two months of the quarter year in and during which such license is paid, then said license fee shall cover the period of the remainder of said quarter year and of the quarter year next succeeding.—As amended by Ordinance No. 5133 (New Series).

Section 7. Upon the payment of the license fee in this Ordinance provided, the Tax Collector shall issue to the person, firm or corporation paying the license fee a license to be known as the "Bill Poster and Outdoor Advertising License" and such payment shall entitle the holder to engage in and carry on the business or occupation described in Section Three of this Ordinance for the period for which such payment was made, provided, however, that the provisions of Ordinance No. 2227 (New Series), entitled "Imposing a Regulating License Fee on Persons, Firms and Corporations Engaging in the Business or Occupation of Maintaining Bill-Boards and Bulletin-Boards, or of Bill-Posting, Bulletin-Sign Painting and Outdoor Advertising," in so far as such Ordinance relates to the payment of a license fee shall continue in force until the end of the quarter ending June 30th, 1917.

Section 8. No Billboard shall have an advertising surface of more than ten (10) feet from the lower to the upper edge thereof without the issuance therefor of the special permit by the Board of Supervisors hereinafter mentioned.

Section 9. Billboards may be erected and maintained which have an advertising surface of more than ten (10) feet from the lower to the upper edge of such billboard, but not exceeding twenty (20) feet of advertising surface from the lower to the upper edge thereof, under a special permit to be issued therefor by the



Board of Supervisors. Such permit shall be granted only upon written application. Such application shall contain the name and address of the applicant, the proposed location and dimensions of said billboard. If the Board of Supervisors deems that such proposed billboard may be erected and maintained on the proposed location of the same without danger to the public health or safety, the Board of Supervisors shall grant a special permit for said proposed billboard in accordance with the specifications provided in the Ordinance.

If at any time it shall appear to the Board of Supervisors that a billboard erected or maintained under the special permit provided in this section has become or is dangerous to the public health or safety, the Board of Supervisors shall so notify the person, firm or corporation owning or controlling such billboard and such person, firm or corporation shall either make said billboard safe and not dangerous to public health or remove the same; and in the event that such person, firm or corporation having received said notice shall thereafter and for the period of ten days fail to comply with the directions therein contained, the Board of Supervisors may revoke such special permit and thereupon the Board of Public Works shall remove such billboard.

Section 10. The surface of all billboards erected or maintained within the limits fixed under the provisions of Subdivision 5 of Section 1 of Chapter 2 of Article 2 of the Charter, within which wooden buildings or structures shall not be erected, placed or maintained, shall be of fireproof, non-combustible material. The surface of billboards erected or maintained outside of such said limits shall be either fireproof, non-combustible material or wood at least one (1) inch in thickness.

Section 11. All billboards with an advertising surface in excess of twenty (20) square feet shall be constructed according to the following specifications, provided, however, that these specifications shall not be considered to interfere with any additional requirements for safety as may be approved by the Board of Public Works as provided in this Ordinance.

The surface of the billboard shall be securely fastened to a framework, the post or uprights of which shall be of redwood not less than four (4) inches by six (6) inches in dimensions, said posts to be spaced not more than eight (8) feet apart and shall extend to the top of the billboard; said posts to be set not less than three (3) feet in the ground and the earth about them to be securely tamped into place. The material which comprises the surface of the billboard shall be securely attached to wooden stringers, which stringers shall run continuously the entire length of the billboard. There shall be not less than one (1) stringer, two (2) inches by four (4) inches in dimensions, for each four (4) feet or fraction thereof that the surface of such billboard is in height, provided, however, that when the advertising surface of a billboard does not exceed ten (10) feet in height, three (3) wooden stringers may be employed; the one to which the top edge of the advertising surface is attached shall be two (2) inches by six (6) inches in dimensions; the one to which the middle of the advertising surface is attached shall be two (2) inches by four (4) inches in dimensions, and the one to which the lower edge of the advertising surface is attached shall be two (2) inches by six (6) inches in dimensions. Each wooden stringer shall be attached to each post with three (3) 30d nails.

The vertical posts shall be braced by wooden braces two (2) inches by six (6) inches in dimensions; one brace to each post; each brace to be securely attached to the top or within two (2) feet of the top of each post with three (3) 40d nails. The lower end shall be securely attached with three (3) 40d nails to a redwood anchor post not less than four (4) inches by six (6) inches by five (5) feet in dimensions. Said anchor post shall be set back of the vertical post a distance equal to three-quarters of the total height of the billboard above the ground, and said anchor post shall be set not less than four (4) feet in the ground and in such a position as to make an angle of approximately ninety (90) degrees with the brace. A cross-piece fourteen

(14) inches long of (2) inch by six (6) inch redwood shall be securely nailed with three (3) 30d nails across the back at the lower end of the anchor post, and a piece of redwood, two (2) inches by six (6) inches by fourteen (14) inches in dimensions, shall be securely nailed with three (3) 30d nails across the front of the anchor post six (6) inches below the ground surface. Redwood anchor posts not less than four (4) inches by six (6) inches by five (5) feet in dimensions, or concrete or steel anchor posts of other types of equal strength may be substituted for the foregoing with the approval of the Board of Public Works. Where the vertical posts rest upon a foundation wall or bulkhead, they shall be securely fastened to the same by means of steel dowelpins, set at least four (4) inches into the foundation wall or bulkhead. There shall be one pin to each post. When a billboard is built in an excavation so that the height of said billboard above the ground is such that the lengths of the posts and braces above ground exceed sixteen (16) feet, the posts and braces shall be strengthened by means of reinforcing braces.

When a billboard having an advertising surface of more than ten (10) feet and not more than twenty (20) feet in height is erected, said billboard shall be made to withstand a lateral wind pressure of twenty (20) pounds per square foot of exposed surface.

Section 12. It shall be unlawful for any person, firm or corporation to erect any billboard without first obtaining a building permit therefor from the Board of Public Works, which said permit shall be granted upon a written application containing the name and address of the applicant, the proposed location of the billboard and the dimensions of the advertising surface thereof. Such application shall be accompanied by specifications for the erection of the proposed billboard. The applicant shall at the time of filing of the application for any permit provided for in this Ordinance pay to the Board of Public Works for the expense of inspection and examination of specifications

and issuance of building permit the sum of one (1) dollar.

Section 13. An ornamental border not wider than one (1) foot may be added to surround the advertising surface of any billboard; and there may be placed at the ends of billboards appropriate ornamental columns; and there may be placed between the lower edge of the billboard and the ground an ornamental lattice-work or baseboard, provided that the lower edge of the billboard or ornamental border shall be at least eighteen inches from the surface of the ground.

Section 14. No paper, cloth or advertising matter shall be allowed or permitted to hang loose from any billboard, but the same shall be securely fastened or glued to the surface of the billboard.

Section 15. All billboards which are constructed on street lines or within three (3) feet therefrom shall have a smooth surface and no nails, tacks or wires shall be permitted to protrude therefrom, except electrical reflectors or devices extending over the top and in front of the billboard to be used for illuminating purposes.

Section 16. It shall be unlawful for any person, firm or corporation, except a public officer or employe in performance of a public duty, to paste, paint, print, nail, tack or otherwise fasten any card, banner, hand-bill, sign, poster or advertisement or notice of any kind or cause the same to be done, on any curbstone, lamp-post, pole, hitching post, watering trough, hydrant, bridge or tree upon a public street or public property within the City and County of San Francisco, except as may be required by the ordinances of the City and County of San Francisco or the laws of the State or of the United States.

Section 17. It shall be unlawful for any person, firm or corporation, except a public officer or employe in performance of a public duty, to paste, post, paint, print, nail, tack or otherwise fasten any card, banner, hand-bill, sign, poster, advertisement or notice of any kind or cause the same to be done on any property of

the City and County of San Francisco without the consent of the Board of Supervisors.

Section 18. It shall be unlawful for any person, firm or corporation, except a public officer or employe in performance of a public duty, or a private person in giving legal notice, to paste, post, paint, print, nail, tack or otherwise fasten any card, banner, hand-bill, sign, poster, advertisement or notice of any kind upon any property without the written consent of the owner, holder, lessee, agent or trustee thereof.

(b) It shall be unlawful for any person, firm or corporation except a public officer or employe in performance of a public duty, or a private person in giving a legal notice, to paste, post, paint, print, nail, tack, or otherwise fasten any card, banner, hand-bill, sign poster, advertisement, or notice of any kind upon any property situated on the following streets, boulevards or highways, or portions of such streets, boulevards or highways in the City and County of San Francisco:

Twin Peaks Boulevard for its entire length.

Roosevelt Way for its entire length.

Telegraph Hill Drive for its entire length.

El Camino Del Mar for its entire length.

Marina Boulevard for its entire length.

Sunset Boulevard for its entire length.

Harding Boulevard for its entire length.

Portola Drive for its entire length.

Skyline Boulevard from Sloat Boulevard to City Limits.

Great Highway and Esplanade from Fulton Street to Sloat Boulevard.

Nineteenth Avenue Extension from Sloat Boulevard to Junipero Serra Boulevard.

Bay Shore Highway from Third Street to Raymond St.

Sloat Boulevard from the Great Highway to the Junipero Serra Boulevard.

Junipero Serra Boulevard from Sloat Boulevard to the County Line.

The East side of the Market Street Extension from Mono Street to Portola Drive.

Alemaney Boulevard from Mission Street Viaduct to Junipero Serra Boulevard.



Laguna Honda Boulevard from Lawton Street to Dewey Boulevard.

Provided, however, that nothing herein contained shall be deemed to restrict or prohibit the use of advertising purposes of, or the changing of advertising copy on, any advertising sign or advertising structure now erected or maintained upon any property situate upon said streets, boulevards or highways above named.

Any advertisement prohibitive by this section and the next preceding section may be taken down, moved or destroyed by anyone. (Amended by Ordinance No. 8574. Approved October 26, 1929.)

Section 19. No person, firm or corporation shall scatter, daub or leave any paint, paste, glue or other substance used for painting or affixing advertisement matter upon any public street or sidewalk or scatter or throw or permit to be scattered or thrown any bills, waste matter, paper, cloth or materials of whatsoever kind removed from billboards on any public street or on private property.

Section 20. The provisions of this Ordinance do not apply to signs, transparencies, advertisements or sign devices described and regulated in Ordinance No. 1009 (New Series), as amended, approved December 28, 1909, and entitled "An Ordinance regulating the construction, erection and maintenance of signs, transparencies, advertisements, bulletin boards and clocks on or about buildings, or over public streets and thoroughfares, providing for the inspection of same.

Section 21. The provisions of this Ordinance do not apply signs not exceeding twenty (20) square feet in size, familiarly known as real estate signs, advertising for sale or rent the property upon which they stand, but all such signs shall be securely fastened to the ground or to the structures to which they are attached.

Section 22. There shall be placed and maintained on the top of each billboard and each advertising sign the name, plainly painted, of the person, firm or corporation owning or who is in possession, charge or control of the same, for advertising purposes.

Section 23. Every person, firm or corporation engaging in or carrying on the business or occupation of billposting or advertising sign painting or outdoor advertising or maintaining billboards shall cause the name of such person, firm or corporation to be plainly painted in a conspicuous place on the outside of any wagon or vehicle used in such business or occupation and shall keep the same plain and distinct at all times. Every employe of any person, firm or corporation, while employed in posting bills or painting signs or bulletins shall wear a metal badge or shield on which shall appear in legible characters the name of the person, firm or corporation by whom such employe is employed.

Section 24. It is hereby declared that each of Sections 1 to 23, both inclusive, of this Ordinance is severally from each and every of the other sections thereof and that each thereof has been passed independently and severally from each and every of such others and irrespective of the passage thereof.

Section 25. Any person, firm or corporation violating any provision or provisions of this Ordinance shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be punished by a fine not exceeding two hundred and fifty (\$250.00) dollars, or by imprisonment in the County Jail for not exceeding one (1) month, or both such fine and imprisonment.

Section 26. Ordinance No. 2227 (New Series), approved March 18th, 1913, and entitled "Imposing a Regulating License Fee on Persons, Firms and Corporations Engaging in the Business or Occupation of Maintaining Bill-Boards and Bulletin-Boards, or of Bill-Posting, Bulletin-Sign Painting and Outdoor Advertising," except as otherwise provided in Section 7 of this Ordinance, and Ordinance No. 2107 (New Series); approved December 11th, 1912, entitled "Regulating the Construction, Erection and Maintenance of Billboards and Other Boards, Fences, Signs and Structures Erected for Advertising Purposes, or Upon Which Any Advertisement is Shown, Painted or Displayed in any way,

and Regulating Bill-Posting and Bulletin-Sign Painting and Outdoor Advertising" are hereby repealed, and all other ordinances or part of ordinances in so far as they conflict with this Ordinance are hereby repealed.

Section 27. This Ordinance shall take effect and be in force from and after the date of its passage.

### **GAS APPLIANCE ORDINANCE**

(Code No. 11.08)

**Bill No. 55, Ordinance No. 11.83, as follows:**

An ordinance regulating the sale, installation, maintenance and repair of appliances designed to employ natural, mixed or manufactured gas as a fuel medium, and the installation, maintenance and repair of house gas piping in the City and County of San Francisco; providing for the inspection of said appliances and/or house gas piping; providing for the issuance of permits for the installation and for repair of said appliances and/or house gas piping and the collection of fees therefor; providing for the licensing of persons engaged in the business of selling, installing and for repairing said appliances and the installation, maintenance and repair of house gas piping; providing for penalties for the violation of this ordinance, and repealing all ordinances or parts of ordinances in conflict therewith.

Be it ordained by the people of the City and County of San Francisco as follows:

Section 1. For the interpretation of this ordinance the words and terms referred to in Section 2 (a) to (p), inclusive, shall be defined as follows:

Section 2. (a) Person shall include firm, corporation or co-partnership. Masculine gender shall include feminine gender, and the feminine gender shall include the masculine gender. Singular shall include plural.

(b) Gas Appliance Dealer: One who maintains an established place of business for the installation, repair or sale of gas appliances.

(c) Gas Appliance: A fixture or apparatus manufactured and designed to use natural, manufactured or

mixed gas as a medium for developing light, heat or power, and the term "appliance" shall be construed herein as including gas ranges, gas water heaters, gas ovens, gas furnaces, gas portable heaters, gas room heaters and gas burners of all kinds, together with any attachments or apparatus that are manufactured or offered for sale and/or sold for the purpose of attaching to any type of gas appliances, such as solid tops, pilot lights, governors, regulators and so-called fuel savers and safety devices; provided, that nothing herein contained shall be construed to apply to approved metal tubing and connections, appliances, appurtenances or devices used for strictly experimental or scientific purposes, or to gas-burning appliances for strictly industrial and/or commercial uses.

(d) Vent Opening: An opening or collar which is provided on a gas appliance for the purpose of conveying the products of combustion from such appliance to a "vent connection" or "vent."

(e) Vent Connection: A conduit or pipe designed to convey the products of combustion from a gas appliance to a flue or chimney, and functioning in a manner similar to the ordinary stove pipe.

(f) Vent: A conduit or pipe designed to convey the products of combustion from the vent opening of a gas appliance to the outside atmosphere, and functioning in a manner similar to a "vent connection" and the ordinary chimney or flue combined.

(g) Flue: "Flue" when used in this ordinance means a conduit, vertical, or nearly so, in direction, for conveying products of combustion delivered to it by a vent connection to the outer air.

(h) Flue Opening: "Flue opening" when used in this ordinance means an opening in the flue or chimney for the purpose of connecting the "vent connection" to the flue or chimney.

(i) Vented Appliance: A "gas appliance" designed or installed in such a manner that the combustion products are conveyed directly to a gas vent, flue or chimney.

(j) Unvented Appliance: A "gas appliance" designed

or installed in such a manner that the combustion products are not conveyed directly by means of an attachment or appurtenance to a gas vent, flue or chimney.

(k) **Combustible Material:** Walls, floors, ceilings, shelves, or other parts of a building constructed of wood, composition, or paper, and including walls constructed of wooden studding, lath and plaster.

(l) **Protected combustible material** is "combustible material" which is protected with a metal shield extending over the exposed area, with an air space of at least one inch between such shield and the combustible material, or, in lieu of such air space, at least one layer of one-quarter ( $\frac{1}{4}$ ) inch thick cellular asbestos between such shield and the combustible material, or combustible material which is protected with other insulatory materials affording equal protection and approved by the Bureau of Fire Prevention and Public Safety.

(m) **House Gas Piping:** Any run of gas piping or fittings installed on any premises or in any building on the outlet side of the gas meter, beginning within thirty (30) inches of the meter location, or extending from gas pipes anywhere beyond said location and ending at the capped or plugged outlets ready to connect with gas fixtures or gas appliances, but does not include the connection of the gas fixtures, gas appliances or gas meter or any portion of the gas service piping from street mains.

(n) **Gas Space Heater:** An appliance designed to develop warm air for heating purposes, and installed above the level of the floor of room or other enclosure to be heated.

(o) **Gas Furnace:** A heating appliance designed to develop warm air for heating purposes, and installed below the level of the floor or room or enclosure to be heated.

(p) **Minor Repairs:** "Minor repairs" are adjustment of appliances, replacement of parts, repairing leaks and similar work which does not involve rearrangement or installation of any appliance.

Section 3. It shall be unlawful for any person to in-



stall, maintain or repair any gas appliance and/or house gas piping in the City and County of San Francisco until he shall have first obtained a "gas appliance dealer's certificate of competency" or a "master plumber's license" from the Department of Public Health, authorizing him to perform such work in accordance with the provisions set forth in this ordinance; provided, however, that any person directly employed by such gas appliance dealer or licensed master plumber shall be permitted to perform such work by authority of his employer's license or certificate of competency, in which case said employer shall be responsible for the work so performed; and provided, further, that no person's license as a "master plumber" by the City and County of San Francisco shall be required to secure a "gas appliance dealer's certificate of competency" in addition to such "master plumber's license." No license, or certificate of competency, however, shall be required of those performing work defined as "minor repairs" in Section 2-P.

Section 4. Each applicant for a gas appliance dealer's certificate of competency shall file an application in writing with the Department of Public Health on an application furnished by that department.

Section 5. Every license or certificate of competency issued hereunder shall be subject to revocation or suspension by the Department of Public Health for violation by the holder of such license or certificate of competency, or by his agent or employes, of any provision or requirement of the ordinance, or of the rules and regulations hereunder established, or ordinances amendatory thereto, or for the making of any false statement in the application for such license or certificate of competency, or for any other cause which the Department of Public Health shall deem to be good and sufficient after notice. Such notice of hearing will be deemed to have been given when said notice is deposited in the United States Post Office in a sealed envelope, addressed to the licensee at the address given in his application, and the postage prepaid, at least five (5) days prior to the date of such hearing. When the

license or certificate of competency of any person shall have been revoked, no succeeding license or certificate of competency shall be issued to such person without the approval and consent of the Department of Public Health. Upon revocation of any license or certificate of competency, all permits outstanding under such license or certificate of competency shall thereupon become void and shall be cancelled. The penalties of revocation and suspension in this section shall not be a bar to or affect any other remedy or penalty prescribed in this ordinance, but shall be cumulative and in addition to such other remedies or penalties.

Section 6. Every person, firm or corporation desiring to install or connect gas appliances in the City and County of San Francisco shall first obtain a certificate of competency. Such certificate of competency shall be obtained by applying for and passing an examination before a duly appointed examining board.

Such board shall consist of the plumbing inspector, one gas appliance manufacturer, one gas appliance dealer, one master plumber, one representative of a gas utility, and one journeyman plumber.

Examinations shall be held on the second Friday of each month at a time and place to be designated by the Board of Examiners.

The fee for such examination shall be \$5.00, to be paid in advance when the application is made for the examination. Such application to be made to the plumbing inspector at least ten days before the date set for the holding of the examination.

When issued the certificate of competency shall be in full force and effect until same is revoked. Revocation can take place for any infraction or violation of this ordinance.

All persons, firms or corporations who have for one year prior to passage of this ordinance, been operating an established place of business in the City and County of San Francisco, engaged in the installation of gas appliances, shall be deemed to have complied with the provisions of this ordinance and shall be granted a Certificate of Competency, without further examination, on

application to the Department of Public Health and upon payment of the \$5.00 examination fee.

Any person, firm or corporation having a certificate from any other town or city may install gas appliances sold by himself in the City and County of San Francisco without further examination or fee by registering with the Department of Public Health. He shall, however, be governed by all other provisions of this ordinance.

Any person, firm or corporation holding a certificate of competency, lending same to any person, firm or corporation, or taking out a permit at the Department of Public Health in his name but for the use of any other person, firm or corporation not properly registered and accredited to do the work shall have his certificate of competency suspended at the order of the Department of Public Health, or the Department of Public Health may cancel his certificate of competency.

Section 7. It shall be unlawful for any person to install or cause to be installed any gas appliance and/or house gas piping in the City and County of San Francisco without first obtaining a permit from the Department of Public Health so to do.

Section 8. Fees for gas appliance permits shall be paid in advance and shall be computed from the number of such appliances proposed to be installed, as follows:

Gas-fired boilers, each .....	\$1.25
Warm air furnaces, each .....	1.25
Ranges, each .....	.75
Tank water heaters, each .....	.75
Storage heaters, each .....	.75
Instantaneous heaters, each .....	.75
Miscellaneous gas appliance, each.....	.75
Reinspection fee, each .....	.75

For every house gas piping permit issued, a fee shall be paid in advance as follows:

For each gas outlet .....	\$0.25
Minimum fee .....	1.00
Reinspection fee, each .....	.75

### Inspectors, Inspections

Section 9. The Plumbing Inspector is hereby authorized and directed to enforce all the provisions of this ordinance, and he may enter any building or premises for the purpose of making inspection upon presentation of proper credentials.

Section 10. The Plumbing Inspector is hereby authorized to order the disconnecting of any gas appliance and/or house gas piping that has been connected without inspection, or that may be found defective or dangerous to life and property. In all cases where any gas appliance and/or house gas piping is so disconnected it shall be unlawful for any person to reconnect same unless or until authorized by the Plumbing Inspector, and any further reference in this ordinance to the inspector shall be deemed to refer to the Plumbing Inspector.

Section 11. The inspector shall make the following inspections and shall either approve that portion of the work as complete or shall notify the permit holder wherein the same fails to comply with the law.

**Rough Piping Inspection:** To be made after all piping authorized by the permit has been installed, and before any such piping has been covered or concealed or any fixtures or gas appliances have been attached thereto.

**Final Piping Inspection:** To be made after all piping authorized by the permit has been installed and after all portions thereof, if any, which are to be concealed by plastering or otherwise have been so concealed, and before any fixtures or gas appliances have been attached thereto. This inspection shall include a pressure test at which time the piping shall stand an air pressure equal to an eight (8) inch column of mercury, and the piping shall hold this air pressure for a period of ten (10) minutes without any perceptible drop. All necessary apparatus for conducting said test shall be furnished by the permit holder, and the test shall be made in the presence of the inspector.

**Appliance Inspection:** To be made after all fixtures or gas appliances authorized by the permit have been

installed and after the house gas piping is connected with the meter and/or service gas piping of the gas company or other utility supplying or furnishing the gas which is to be used as fuel for the operation of said fixtures or gas appliances.

Section 12. Except as permitted in Section 14, upon completion of the installation of any gas appliance and/or house gas piping, and prior to the use thereof, the Department of Public Health shall be notified that such gas appliance and/or house gas piping is ready for inspection. The inspector shall make such inspection within forty-eight (48) hours of such notice. If the installation is found correct, a certificate of inspection shall be issued.

Section 13. In the case of rough inspection of house gas piping, the inspector shall issue a rough inspection card, which shall be posted in the meter box and kept there until after the final piping inspection, as in this ordinance provided.

Section 14. All domestic gas appliances may be installed and supplied with gas prior to the inspection thereof, provided a "permit for use" tag, which shall be supplied by the Plumbing Department, is attached thereto. This tag shall have written thereon the name of the gas appliance dealer or master plumber making the installation, the date of installation, and the address where appliance is located.

Section 15. It shall be unlawful for any person, firm or corporation, excepting an authorized agent or employee of a person, firm or corporation engaged in the business of furnishing or supplying gas, and whose service pipes supply or connect with the particular premises, to turn on or reconnect gas service in or on any premises where and when gas service is not at the time being rendered.

It shall further be unlawful to turn on or connect gas on or in any premises unless all outlets are properly and securely connected to appliances or capped, plug-



ged or closed by stop-cocks or valves capable of withstanding, without leaking, the gas piping test provided for in this ordinance.

### House Gas Piping

Section 16. Only those licensed to do plumbing work in the City and County of San Francisco may install "house gas piping," except that a gas appliance dealer holding a certificate of competency, may install the necessary connections to connect gas appliances sold and/or installed by himself with gas pipe (or gas meter, when necessary) of any building, provided the requirements of this ordinance for the installation of gas piping are complied with, the required permits secured, and the necessary fees paid; and provided, further, that no concealed piping may be installed by other than those licensed to do plumbing work. Where it is necessary, in accordance with the above provisions, for a gas appliance dealer to run gas connections direct to the meter, no such run shall extend from the meter to any location above the first story.

This is not to be construed as permitting a gas appliance dealer to install house gas piping systems in buildings, even if such a dealer should sell and/or install by himself all the gas appliances to be installed therein, but only to permit the installation of the necessary piping to connect appliances sold and/or installed by himself, in accordance with the provisions set forth above.

Section 17. Permits for house gas piping shall show the total number of gas outlets to be provided for and such other information as may be required by the Department of Public Health.

Section 18. The following regulations as set forth in Sections 19-39, inclusive, shall be the standard for the construction and installation of house gas piping work.

Section 19. For fuel and industrial purposes (including illumination, if any) the diameter of house gas piping installed in any building, the number of lineal feet

and the number of openings allowed shall be in conformity with the following table:

Number of Openings Allowed.

Greatest Length Allowed	Pipe Size	$\frac{1}{2}$ "	$\frac{3}{4}$ "	1"	$1\frac{1}{4}$ "	$1\frac{1}{2}$ "	2"	$2\frac{1}{2}$ "	3"	4"	Capacity in Cu. Ft. Per Hour
10'	$\frac{1}{2}$ "	1									30
70'	$\frac{3}{4}$ "	3	1								100
100'	1"	5	2	1							200
125'	$1\frac{1}{4}$ "	8	4	2	1						350
150'	$1\frac{1}{2}$ "	10	7	4	2	1					500
200'	2"	18	14	7	3	2	1				800
250'	$2\frac{1}{2}$ "	28	22	12	5	3	2	1			1300
300'	3"	60	41	20	9	6	3	2	1		1750
350'	4"	140	86	43	20	12	6	4	2	1	3500

For a given size pipe  $\frac{1}{4}$  of length will deliver twice the discharge or 4 times the length  $\frac{1}{2}$  the discharge.

Section 20. The diameter of the supply pipe to any gas appliance shall not be of smaller size than the inlet connection of such gas appliance.

Section 21. Except as specified below, all pipe used for the installation, extension, alteration and/or repair of any house gas piping shall be standard weight wrought iron or steel pipe, or brass or copper pipe of iron pipe size, and such pipe shall either be new or shall previously have been used for no other purpose than for the conveying of gas. All such pipe shall be free from internal obstructions, splits, or other imperfections which would render it unfit for the purpose intended, and the ends thereof shall be properly reamed.

All fittings used in connection with the house gas piping shall be of malleable iron, brass, copper or equal.

Galvanized wrought iron pipe and galvanized malleable fittings, or standard brass pipe and brass fittings, or standard copper pipe and copper fittings, shall be used for all house gas piping when said pipes are used on the exterior of a building, underground, when embedded in concrete or masonry, or when exposed to unusual damp conditions.

Section 22. All gas pipes shall be well secured to the building and shall be graded toward the meter wherever possible. Vertical pipe risers shall have placed at

the bottom of each riser a tee plugged with a long nipple and cap the same size as the vertical pipe, to serve as a dirt pocket.

Section 23. Piping trapped by a change of grade shall be provided with a suitable drip pipe; said drip pipe must be of the same size as the pipe it serves, and the outlet of such drip pipe must be carried to an exposed accessible location.

Section 24. All branches must be taken from sides or top of horizontal runs.

Section 25. All gas piping must be rigidly supported by straps or hooks in such a manner as to prevent moving.

Section 26. When practicable, all center outlets or drops must be square bent and securely fastened, and where straight drops are necessary, straps must be soldered thereto and securely fastened.

Section 27. All gas meters, when owned or under control of the person, firm or corporation supplying gas shall be installed by the person, firm or corporation supplying the gas. All gas meter locations must be approved by the Plumbing Inspector and shall be located as near as practicable to the point where the service pipe enters the property.

All gas meters, when owned by other than the person, firm or corporation supplying the gas, and which are installed as intermediate or sub-meters on the outlet side of the main meter of the gas utility, shall be installed only at such location or locations as may be approved for that purpose by the Plumbing Inspector.

Section 28. Where more than one meter is set in a building they must all be set at one location, and so placed as to be at all times accessible for inspection, reading and testing, and shutting off gas supply; except that intermediate or sub-meters, as specified in Section 27, may, when owned by other than the gas utility, be permitted to be installed at other locations on approval of the Plumbing Inspector.

Section 29. When one building is in the rear of an-

other building on an interior lot the location of the meters will be determined by the Plumbing Inspector.

Section 30. In order that gas may be supplied, the house piping must be brought to within thirty inches (30") of the proposed location of the gas meter, and where it is necessary to set more than one gas meter, the ends of such house gas pipes must be eighteen inches (18") apart horizontally at the meter location. If more than one horizontal line of meter openings be required, then the vertical distance between such horizontal lines shall not be less than thirty inches (30") and the outlets shall be so arranged as to terminate at the right of the inlet location of gas meter.

Section 31. Gas meters shall not be located under show windows or under stairways or in engine, boiler, heater, or electric meter rooms, except by special permission and where no hazard would exist. Access to all gas meters must be through an opening or door less than 18"x24" long.

Section 32. House gas piping at the meter location shall be plainly marked with tags to designate the section of the building supplied.

Section 33. On each house gas piping run of 29 outlets or less the opening at the meter location shall terminate at a height of not less than thirty inches (30") above the floor, and when there are more than 29 outlets the said opening shall terminate at a height of not less than forty-eight inches (48") above the floor.

Section 34. When a gas meter is located outside of a building, or when the same is exposed, the same must be protected against the weather.

Section 35. When temporary use of gas is desired the Plumbing Inspector may grant a permit for such use for a period not to exceed thirty (30) days, provided that the gas piping which it is desired to be used be given a test equal to that required as a final piping inspection.

Section 36. It shall be unlawful to remove or disconnect any gas fixture or gas appliance without capping or plugging with a screwed joint fitting the outlet from which said fixture or gas appliance was removed. All

outlets to which fixtures or gas appliances are not connected shall be left capped gas tight on any piping system being installed, altered, extended or repaired.

Section 37. No gas piping shall be built in brick, stone, masonry, or concrete walls. When necessary to conceal pipe in this manner it must be run in suitable recesses.

Section 38. No acid, cement or any other composition shall be used for the purpose of repairing or stopping leaks, nor shall water or acid be used to locate leaks.

In no case other than by permission of the Plumbing Inspector is it permissible to repair defects in piping or fittings, but, having been located, the defective pipe or fitting must be removed and replaced with perfect material.

Section 39. No running thread joints shall be used. Where necessary, ground joint unions or right and left couplings may be used. Bushings shall not be used in concealed work.

### Gas Appliances—General

Section 40. The Department of Public Health is authorized and directed to prepare, adopt and promulgate such rules, regulations, requirements and specifications as are necessary or proper to assure safety and protect life, health and property in the sale, installation and use of gas appliances and to assure the most improved methods of construction for safety to life and property. In preparing and adopting said rules, regulations, requirements and specifications, the Department of Public Health may consider the rules, regulations, requirements and specifications of the American Gas Association or any other national rules, regulations, requirements or specifications relating to such subjects. All rules, regulations, requirements and specifications so promulgated shall be published and shall be sent to all gas appliance dealers holding certificates of competency or holders of master plumbers' certificates, and to any person applying therefor.

Provided, however, that the inspector may authorize the sale and use of any appliance that is in the stock



of any gas appliance dealer or jobber on the date of the adoption of this ordinance, by stenciling an approval upon such appliance on or before the . . . day of . . . provided the use of such appliance will not endanger life, health or property.

Section 41. Appliances installed hereafter shall be marked or labeled with a distinctive mark or name by the manufacturer or dealer.

Section 42. Used gas appliances may be reinstalled when, in the opinion of the inspector, such appliances may be used without danger to life or property.

Section 43. Except as provided herein, and in Section 44, every appliance shall be rigidly connected to the house gas piping outlet with standard weight wrought iron or steel pipe and malleable iron fittings, or copper pipe and copper fittings, or brass pipe and brass fittings, and a ground-in valve and a ground joint union or right and left coupling shall be placed between the outlet and the appliance.

Brass or copper tubing may be used for the connection between an appliance and the house gas piping outlet; provided that such tubing shall be of not less in weight than No. 18 gauge and of not less than three-eighths-inch ( $\frac{3}{8}$ " ) outside diameter, and that all connections shall be of approved expansion joints, and that the length of such tubing used to connect any one gas appliance shall not exceed six (6) feet. Each appliance so connected shall have a ground-in valve with lever handle cast integral at the house gas piping outlet.

Section 44. Approval flexible metal tubing may be used for connecting gas appliances designed for portable use, such as washing machines, ironers, or other appliances the location of which must be changed during operation; provided, however, that such approved flexible metal tubing shall not exceed six feet (6') in length. There shall not be any shut-off or gas-cock between such tubing and the burner or burners. Where such tubing is used, a shut-off valve or gas-cock shall be installed at the point where tubing is connected to the gas supply pipe.

Section 45. Gas appliances so constructed that the burners are not shielded by metal or other approved insulating material shall not be located within twelve inches (12") of any combustible material. Appliances so constructed that metal shields or other approved insulating materials are an integral part of their construction shall not be located so as to permit the burners to be within six inches (6") of combustible material nor within three inches (3") of protected combustible material.

All vented gas appliances, except gas ranges and radiant type heaters, shall be equipped with an approved type of draft hood.

Section 46. Gas plates or ranges shall not be installed in rooms used for sleeping purposes; they may, however, be installed for cooking purposes in a room designed to conform to the legal requirements for a kitchen. Every gas range shall, however, be connected with a "vent connection" to a proper flue or chimney. Combination gas ranges and trash burners may be vented by a common "vent connection" to any chimney or flue constructed in accordance with the provisions of the Building Code for use by trash burners.

Gas plates may be used for commercial purposes in any room having a floor area of not less than fifty (50) square feet; provided, however, that such room has a permanent ventilation consisting of an opening not higher than one (1) foot above the floor and an opening not lower than one (1) foot below the ceiling. Each such opening shall have an unrestricted area of at least one hundred and twenty (120) square inches, and each such opening shall lead through unrestricted ducts to the outside of the building, where an uninterrupted supply of fresh air is assured.

Gas plates and ranges shall not be installed within three (3) feet of any ceiling of combustible material.

Section 47. Every gas water heater installed shall be rigidly connected to the house gas piping outlet and shall be placed not less than the distance given in Section 45 from any combustible or protected combustible material.

Gas water heaters shall not be installed in bathrooms, rooms used for sleeping purposes, or closets, nor in any room or enclosure having a floor area of less than sixteen (16) square feet. Gas water heaters shall not be installed in recesses unless such recesses shall have one side entirely open and not equipped with any door or other closing device, and the inside, including the top, bottom and sides of such recess, shall be lined with asbestos boards not less than one-quarter ( $\frac{1}{4}$ ) of an inch in thickness, or other approved insulation, and in no case shall a gas water heater be located less than three inches (3") from any such insulated walls.

Every gas water heater shall be properly vented to a flue or chimney.

All manually operated water heaters shall be installed with an approved pressure relief valve set at a pressure not higher than fifty (50) pounds above the pressure of the water supply.

All automatic storage water heaters shall be equipped with an approved automatic shut-off valve set below the boiling point of water, and with an automatic device so designed that the supply of gas to the main burners in connection therewith will be automatically shut off when combustion of gas is not taking place at the pilot; and shall also be equipped with an approved pressure relief valve set at a pressure not higher than fifty (50) pounds above the pressure of the water supply.

Section 48. Unvented gas space heaters, such as blue flame, luminous flame, radiant type, wall heaters, hot air radiators, and gas steam radiators shall not be installed in any room or other enclosure having a floor area of less than fifty (50) square feet, nor shall any unvented appliance be installed in any room used for sleeping purposes. Vented appliances installed in sleeping rooms shall be rigidly attached to the house gas piping outlet.

Section 49. Gas space heaters may be installed in fireplaces, provided such fireplaces conform to the requirements of the Building Law of the City and County of San Francisco. Gas space heaters may be installed in imitation fireplaces, provided the recess of such imita-

tion fireplace is not more than thirteen inches (13") in depth and it shall be so constructed as to be not adaptable for use as a coal-burning fireplace. The recess of every such imitation fireplace shall be protected with a lining of brick, tile, or other approved incombustible material not less than one (1) inch in thickness. Such imitation fireplace shall be properly vented and be labeled by means of a metal plate set permanently in the fireroofing, bearing the words, "For gas appliances only."

Section 50. Gas furnaces, except floor furnaces, shall be placed not less than twelve (12) inches from protected combustible material, and not less than eighteen (18) inches from unprotected combustible material, and shall set on masonry, concrete or other incombustible floors or upon floors protected by top floors of masonry, concrete, tile or similar material at least two (2) inches in thickness, or asbestos board not less than one-quarter ( $\frac{1}{4}$ ) of an inch in thickness and covered with No. 20 U. S. standard gauge galvanized iron. The top of gas furnaces shall not be less than nine (9) inches from protected combustible material or not less than eighteen (18) inches from unprotected combustible material.

Gas furnaces shall not be installed in any place or in such manner as to be inaccessible for inspection or repair.

Gas furnaces shall not be located under any stairway unless such furnaces are located within Class A fire-proof enclosures.

Every room or enclosure in which a gas furnace is installed or operated shall be provided with permanent ventilation which will furnish sufficient supply of air to properly support combustion and ventilate such room or enclosure. Such permanent ventilation shall consist of an opening not higher than one (1) foot above the floor or adjoining ground level, and an opening not lower than one (1) foot below the ceiling, and each of such openings shall have an unrestricted area of at least one (1) square foot and shall lead through unrestricted ducts to the outside of the building, where an uninterrupted supply of fresh air is assured. Such openings

shall be screened with wire screens or grills having a mesh not smaller than one-half ( $\frac{1}{2}$ ) inch in any dimension.

For every warm air furnace using gas, or any other fuel, hereafter installed, an air intake shall be required. It shall be either a fresh air intake from the outside of the building or a return air intake from the space to be heated by such furnace, or combination of the two, and such air intake shall not be located in such manner as to draw air from the room or enclosure in which such furnace is installed or from the space immediately adjacent to any openings which are required for permanent ventilation of such room or enclosure.

Every air intake shall be constructed of metal or incombustible material or else be lined with metal or other approved fire-resistive material satisfactory to the Fire Prevention Bureau.

The net cross-sectional area of a fresh air intake for a warm air furnace shall not be less than the total cross-sectional area of all hot air outlets.

No damper shall be placed in an air intake, but the end thereof may be screened with wire screen having a mesh not smaller than one-half ( $\frac{1}{2}$ ) inch in any dimension, or with gratings, register plates, or similar devices having an effective ventilating area not less than the required cross-sectional area of the air intake.

Section 51. Gas furnaces of the floor type shall not be installed in any location inaccessible for inspection or repair. An opening or door not less than eighteen inches (18) by twenty-four inches (24) in size, shall be provided for access to the room or enclosure in which any such gas furnace is installed, and such gas furnace shall be vented to a proper vent, flue or chimney.

Section 52. A warm air or other furnace or heater which is designed to use fuel other than gas for the development of heat may be converted into a gas appliance by means of the installation of gas burners into the fire pot thereof, provided such gas burners are of a design and construction as set forth in the specifications of the Bureau of Standards of the Department of Commerce, and provided further that they are installed



in accordance with the following provisions and in a manner that their use therein will not endanger life, health or property.

(a) The heating element must stand a test for gas tightness so that no products of combustion or gas may enter rooms or spaces to be heated.

(b) Vents and flues must be in good condition as to gas tightness and draft, or made so before converting any such apparatus.

(c) If refractory material is used as part of gas burner or burners same must be supported above ports of burner a sufficient height to allow combustion before impingement upon said refractory material.

(d) Burners must be equipped with continuous burning pilot lights controlled from the manifold of the burner and fixed to the burner in such a way as to provide a rigid relative position between the pilot tip and ports of the burner. Provisions must also be made for a simple means of lighting the pilot light which will not make it necessary for the operator to reach into the pot.

(e) Burners using over 60,000 B. t. u. per hour must be equipped with a partially opened check damper in the vent or by a draft hood.

(f) The manifold of the burner must be equipped with a main control valve of the plug type, with a metal handle which is cast integrally with the plug, and operated with stops at 90 degrees apart so as to indicate at a glance the "on" and "off" positions.

(g) The burner or burners shall be so located that no part of the flames impinge on the surfaces of the combustion chamber or heating elements, and shall be securely fastened in place to prevent twisting, sliding or dropping out of position, but so installed as to permit easy removal for cleaning and repair.

(h) The furnace or heater converted shall be checked for secondary air supply, and so regulated or altered that proper and complete combustion will be provided for.

#### **Illuminating Fixtures**

Section 53. Every illuminating fixture installed in the City and County of San Francisco shall be of a design and construction approved by the inspector.

Illuminating fixtures shall not be located within three feet (3) of any gas meter, back of a door, in a closet, nor in any other location where, in the opinion of the inspector, any fire hazard would be entailed. Swinging bracket fixtures are hereby prohibited.

#### Ventilation for Gas Appliances.

Section 54. No gas appliance shall be hereafter installed, or any gas appliance replaced, unless the room or place where such a gas appliance is located is ventilated so as to properly support combustion. Except as provided in this section and in Section 55, no gas appliance shall hereafter be installed, or any existing gas appliance replaced, unless the same shall be vented to a flue which shall be the full size of the "vent opening" of the appliance to be vented. No damper shall be installed in any "vent connection," "vent," "flue" or "chimney" to which a gas appliance is vented, except as may be specifically provided for elsewhere in this ordinance. Dampers integral in the construction of kitchen heater type or combination ranges are permissible.

Gas refrigerators, gas sad irons, gas mangles and gas washing machines, the gas consumption of which is less than five thousand (5000) B. t. u. per hour (approximately five cubic feet per hour) are not required to be vented, nor shall permanent ventilation, as specified in Section 55, be required for the room or enclosure in which said appliances are installed or operated; nor shall said appliances be required to be equipped with cut-off valves as specified in Section 55.

Section 55. Heating appliances designed by the manufacturer to be used unvented must be equipped with approved cut-off valves which automatically shut off the supply of gas when combustion is not taking place at the burners, and said appliances shall not be installed in any room or enclosure unless permanent ventilation be provided for. For such appliances having a rated gas capacity of fifty (50) cubic feet or more per hour there shall be two ventilating ducts or openings provided, with not less than one hundred and twenty (120)

square inches of free area in each, and which shall lead to an area where an uninterrupted supply of fresh air is assured. One such opening shall be located at a point not more than one foot (1) above the floor level, the other to be at a point not more than one foot (1) below the level of the ceiling. For such appliances having a rated capacity of less than fifty (50) cubic feet per hour, only one such ventilating duct or opening shall be required, which shall not have less than thirty-six (36) square inches of free area and shall be located at a point not more than one foot (1') below the level of the ceiling; provided, however, that where the rated capacity of the appliance is less than twenty-five (25) cubic feet per hour, the Plumbing Inspector may modify the provision as to the location of this required ventilating duct or opening if, in his opinion, any other location thereof would be more practical for the particular heating appliance to be installed, and would provide ample ventilation for the safe operation of said appliance.

Section 56. No gas appliance shall be installed in a public or commercial garage unless the design, operation and installation of said appliance is such as to eliminate the possible ignition of inflammable vapors.

#### **Chimneys, Flues and Vents.**

Section 57. Every chimney, flue or vent to which a gas appliance is connected, or which is installed for the purpose of connecting a gas appliance thereto, shall be constructed and installed in accordance with the Building Code.

No gas appliance or appliances shall be connected to any chimney, flue or vent unless the internal area of such chimney, flue or vent is large enough to accommodate the appliance or appliances to be connected thereto, as set forth in the following paragraph:

The internal area of any chimney, flue or vent to which a gas appliance is connected shall not be less than the internal area of the largest "vent connection," or "vent opening," as the case may be, plus 50 per cent of the total area of all other additional "vent connec-

tions" or "vent openings" which are connected thereto; provided, however, that where round "vent connections" or "vent openings" are connected to a rectangular chimney, flue or vent, the internal area of such rectangular chimney, flue or vent shall be 20 per cent greater than that required above. The following table shall be used for the computation of flue areas in round flue pipes, vents and vent connections:

3-inch round pipe	7.1 square inches
4-inch round pipe	12.6 square inches
5-inch round pipe	19.6 square inches
6-inch round pipe	28.3 square inches
8-inch round pipe	50.3 square inches

Section 58. No flue opening shall be smaller than the vent connection required for the gas appliance or appliances that will be connected to such opening, and every flue opening to which a gas appliance is not connected shall be tightly closed by means of an approved cap or similar device.

#### Vent Connections.

Section 59. Every vent connection which is required by this ordinance shall be constructed of metal, as herein specified, or of other approved incombustible material of equal durability and adaptable for such purpose.

Metal vent connections shall be constructed of sheet copper weighing not less than sixteen (16) ounces per square foot or of Monel metal or equal not lighter than No. 26 U. S. standard gauge, and the edges of such sheet metal shall be securely connected together with a locked or riveted seam in such a manner as to form a practically tight pipe. Joints between lengths of pipe shall be at least two (2) inch lap joints and so constructed and fastened as to be practically tight.

Metal vent connections ten (10) feet or less in length and completely exposed to view or easily accessible for inspection may be constructed of galvanized sheet iron not lighter than No. 26 U. S. standard gauge, provided, however, that all seams and joints shall be made in the same manner as is customary in

the construction of ordinary stove pipe and stove-pipe fittings, and provided further, that stoves or ranges may be connected to a flue or chimney with stove pipe.

No vent connection shall have an area less than the areas of the vent opening or collar on the appliance to which such vent connection is connected, and every vent connection which is connected to more than one such vent opening or collar shall have an area not less than the area of the largest vent connection plus fifty per cent (50 per cent) of the area of all other additional vent connections connected thereto.

Section 60. Vent connections shall be properly connected to appliances and shall be securely supported by means of substantial hangers at intervals of not more than ten (10) feet on all horizontal runs. Vent connections shall also be properly connected to a flue or chimney by means of an approved metal thimble attached to the flue or chimney in a gas and water-tight manner. Vent connections made through a fireplace shall be made by means of a galvanized iron or steel plate set in the chimney throat, thoroughly cemented and to be air and gas tight.

Horizontal vent connections depending on natural draft shall not exceed twenty (20) feet in length except by special permission of the Plumbing Inspector, nor shall such horizontal vent connections exceed in length the height of the chimney or flue to which connected, measured as the vertical distance between the top of the burners of the appliance and the outlet of the chimney or flue. All horizontal runs exceeding four (4) feet in length shall have a grade of not less than one (1) inch to each lineal foot of length rising toward the flue or chimney. The above shall also apply to horizontal portions of vents, in so far as applicable. Every horizontal metal "vent connection" exceeding ten (10) feet in length, and located in a basement, shall be insulated with two (2) plies of one-quarter inch ( $\frac{1}{4}$  inch) corrugated asbestos paper, or of a material having equal insulating value.

Vent connections, or vents, except by special permission of the Plumbing Inspector and approval of the Fire



Prevention Bureau, shall not be placed less than three (3) inches from any combustible material nor less than one and one-half (1½) inches from protected combustible material. Bends or offsets in horizontal vent connections shall be avoided wherever possible, and where necessary shall be made at widest angles possible. Vent connections, or vents, passing through walls, partitions or floors, shall have approved double insulating sleeves and shall be installed in accordance with the provisions of the Building Code.

No "vent connection" connected to any gas appliance having pilot provision for automatic or remote control, except gas ranges, shall be connected to any chimney or flue which is used as a smoke flue for any stove, boiler, heater or other apparatus designed to burn wood, coal, oil, or any fuel other than gas, unless such pilot provision is so designed that the supply of gas to the main burners in connection therewith will be automatically shut off when combustion of gas is not taking place at the pilot.

#### **Maintenance of Vent Connections.**

Section 61. Every "vent connection" shall be maintained in good condition; provided, however, that no "vent connection" not conforming to the requirements of this ordinance shall be used or maintained if in the judgment of the Plumbing Inspector the use or maintenance thereof would endanger life or property.

#### **Non-Liability of City**

Section 62. This ordinance shall not be constructed as imposing upon the City and County of San Francisco any liability or responsibility for damages to any person injured, asphyxiated, or who suffers loss of life by any defects in any gas appliance and/or house gas piping, or by the installation thereof, nor shall the City and County of San Francisco, or any official or employee thereof, be held as assuming any such liability or responsibility by reason of the inspection authorized hereunder or certificate of inspection issued by the Plumbing Inspector. Nor shall the City and County of San Francisco or any official or employee thereof be

held as assuming any liability or responsibility for property damage, from any cause whatsoever, which may have been caused by gas leakage, fire or explosion of any sort coming from, or during the operation of any gas appliance and/or house gas piping.

### **Violations and Penalties.**

Section 63. Any person violating any of the provisions of this ordinance or who causes, permits or suffers the same to be done, shall be deemed guilty of a misdemeanor, and each such person shall be guilty of a separate offense for each and every day or portion thereof during which any violation of any of the provisions of this ordinance is committed, continued or permitted, and upon conviction of any such violation such person shall be punished by a fine of not more than two hundred and fifty dollars (\$250) or by imprisonment for not more than fifty (50) days, or by both such fine and imprisonment.

### **Validity.**

Section 64. If any section, subsection, sentence, clause or phrase of this ordinance is for any reason held to be unconstitutional, such decision shall not affect the validity of the remaining portions of this ordinance. The Board of Supervisors of the City and County of San Francisco hereby declare that it would have passed this ordinance and each section, subsection, sentence, clause or phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses or phrases be declared unconstitutional.

### **Ordinances Repealed.**

Section 65. All ordinances or parts of ordinances in conflict with this ordinance are hereby repealed.

**Passed for Second Reading.**—Board of Supervisors, San Francisco, June 13, 1932.

**Ayes:** Supervisors Breyer, Brown, Colman, Gallagher, Havenner, Hayden, Power, Roncovieri, Spaulding, Stanton.

**Noes:** Supervisor McSheehy.

**Absent:** Supervisors Canepa, Miles, Peyser, Shannon.

June 15-1t

J. S. DUNNIGAN, Clerk.



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